

O'Bryen, Barbara

From: Switzer, Juliet
Sent: Thursday, October 14, 2004 2:10 PM
To: O'Bryen, Barbara
Subject: RE: alignment

sorry. seq id no 58 of serial number 10077176.
thanks.

-----Original Message-----

From: O'Bryen, Barbara
Sent: Thursday, October 14, 2004 2:10 PM
To: Switzer, Juliet
Subject: RE: alignment

It would be easier for me to do this if I had & seq id # & serial number.

-----Original Message-----

From: Switzer, Juliet
Sent: Thursday, October 14, 2004 2:02 PM
To: O'Bryen, Barbara
Subject: alignment

Hi barb.

Will you please align nucleotides 252-1430 against GenBank X60012?
Will you let me know when you've done it- I'll come pick up the print out.
Thanks.
Juliet

This Page Blank (uspto)

FEATURES

Search completed: October 14, 2004, 16:31:11
Job time : 1 secs

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RESULT 2
x60012/c
; TOIG of: x60012 check: 2359 from: 1 to: 1179
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; LOCUS HSP3003 1179 bp mRNA linear PRI 23-JUN-1994
; DEFINITION Human mRNA for mutated p53 transformation suppressor gene.
; ACCESSION X60012
; VERSION X60012.1 GI:506436
; KEYWORDS p53 gene; p53 protein.
; SOURCE Homo sapiens (human)
; ORGANISM Homo sapiens
; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
;
; REFERENCE 1 (bases 1 to 1179)
; AUTHORS Farrell,P.J., Allan,G.J., Shanahan,F., Vousden,K.H. and Crook,T.
; TITLE p53 is frequently mutated in Burkitt's lymphoma cell lines
; JOURNAL EMBO J. 10 (10), 2879-2887 (1991)
; MEDLINE 92007731
; PubMed 1915267
; REFERENCE 2 (bases 1 to 1179)
; AUTHORS Farrell,P.J.
; TITLE Direct Submission
; JOURNAL Submitted (03-JUN-1991) P.J. Farrell, Ludwig Inst for Cancer Res,
; St Mary's Hospital Med School, Norfolk place, London W2 1PG, UK
; COMMENT mutated p53 transformation suppressor gene.
; FEATURES
; source 1. 1179
; /organism="Homo sapiens"
; /mol_type="mRNA"

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GenCore version 5.1.6
Copyright (c) 1993 - 2004 CompuGen Ltd.

OM nucleic - nucleic search, using sw model

Run on: September 28, 2004, 12:05:54 ; Search time 16 Seconds
(without alignments)
2.637 Million cell updates/sec

Title: SEQ58-252-1430
Perfect score: 1179
Sequence: 1 atggaggagccgcagtcagag.....cagaagggcctgactcagac 1179

Scoring table: IDENTITY_NUC
Gapop 10.0, Gapext 0.5

Searched: 13 seqs, 17894 residues

Total number of hits satisfying chosen parameters: 26

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : issdb.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
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4	1179	100.0	1182	1	US-08-460-736-215
5	1179	100.0	1182	1	US-09-535-370-215
6	1179	100.0	1484	1	US-08-184-009-103
7	1179	100.0	1484	1	US-08-458-356-103
8	1179	100.0	1484	1	US-08-460-736-103
9	1179	100.0	1484	1	US-09-535-370-103
10	1179	100.0	1512	1	US-08-184-009-99
11	1179	100.0	1512	1	US-08-458-356-99
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17	26.6	2.3	1182	1	US-08-460-736-215
18	26.6	2.3	1182	1	US-09-535-370-215
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25	26.6	2.3	1512	1	US-08-460-736-99
26	26.6	2.3	1512	1	US-09-535-370-99

ALIGNMENTS

RESULT 1
US-08-184-009-215

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; Sequence 215, Application US/08184009
; Patent No. 5833975
; GENERAL INFORMATION:
; APPLICANT: Paoletti, Enzo
; APPLICANT: Tartaglia, James
; APPLICANT: Cox, William I.
; TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
; NUMBER OF SEQUENCES: 217
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford
; STREET: 530 Fifth Avenue
; CITY: New York
; STATE: NY
; COUNTRY: USA
; ZIP: 10036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/184,009
; FILING DATE: 19-JAN-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Frommer, William S.
; REGISTRATION NUMBER: 25,506
; REFERENCE/DOCKET NUMBER: 454310-2530
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 840-3333
; TELEFAX: (212) 840-0712
; TELEX: 425066CURTMS
; INFORMATION FOR SEQ ID NO: 215:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1182 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; US-08-184-009-215
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Query Match 100.0%; Score 1179; DB 1; Length 1182;
Best Local Similarity 100.0%; Pred. No. 0.00062;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAGGAGCGCGCAGTCAGATCCTAGCGTCGAGCCCTCTGAGTCAGGAACATTTTCA 60
Db 1 ATGAGGAGCGCGCAGTCAGATCCTAGCGTCGAGCCCTCTGAGTCAGGAACATTTTCA 60

Qy 61 GACCTATGGAACACTTCTCTGAAAAACAAGTTCTGTCCCCCTGCCGTCACCAAGCAATG 120
Db 61 GACCTATGGAACACTTCTCTGAAAAACAAGTTCTGTCCCCCTGCCGTCACCAAGCAATG 120

Qy 121 GATGATTGATGCTCCCGCGGAGATATTCACAAATGGTTCATGAAGCCAGGTCCA 180
Db 121 GATGATTGATGCTCCCGCGGAGATATTCACAAATGGTTCATGAAGCCAGGTCCA 180

Qy 181 GATGAAGCTCCCAAGATGCCAGAGGCTGCTCCCGCGTGGCCCTGCACCCAGAGCTCCT 240
Db 181 GATGAAGCTCCCAAGATGCCAGAGGCTGCTCCCGCGTGGCCCTGCACCCAGAGCTCCT 240

Qy 241 ACACCGCGGCCCTGCAACAGCCCTCTGCGCCCTGTGATCTTCTGCTCCCTTCCAG 300
Db 241 ACACCGCGGCCCTGCAACAGCCCTCTGCGCCCTGTGATCTTCTGCTCCCTTCCAG 300

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RESULT 2
US-08-458-356-215
; Sequence 215, Application US/08458356
; Patent No. 5942235
; GENERAL INFORMATION:
; APPLICANT: Paoletti, Enzo
; APPLICANT: Tartaglia, James
; APPLICANT: Cox, William I.
; TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
; NUMBER OF SEQUENCES: 217
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford
; STREET: 530 Fifth Avenue
; CITY: New York
; STATE: NY
; COUNTRY: USA
; ZIP: 10036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/458,356
FILING DATE: 02-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/184,009
FILING DATE: 19-JAN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Frommer, William S.
REGISTRATION NUMBER: 25,506
REFERENCE/DOCKET NUMBER: 454310-2530
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 840-3333
TELEFAX: (212) 840-0712
TELEX: 425066CURTMS
INFORMATION FOR SEQ ID NO: 215:
SEQUENCE CHARACTERISTICS:
LENGTH: 1182 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
US-08-458-356-215
Query Match 100.0%; Score 1179; DB 1; Length 1182;
Best Local Similarity 100.0%; Pred. No. 0.00062;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 ATGAGGAGCGCCAGTCAGATCTTAGCGTCGAGCCCGCTCTAGTCAGGAAACATTTTCA 60
DB 1 ATGAGGAGCGCCAGTCAGATCTTAGCGTCGAGCCCGCTCTAGTCAGGAAACATTTTCA 60
QY 61 GACCTATGAAACTACTTCTGAAACACAGCTTCTGTCCTCCCTGCGTCCCAAGCAATG 120
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QY 181 GATGAGCTCTCCAGAAATCCAGAGGTGTCTCCCGGTGGCGCTCCACAGCAGTCTCT 240
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DB 601 TTGCGTGTGAGTATTGATGACAGAAACACTTTTCACATAGTGTGGTGTGCCCTAT 660

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RESULT 3
US-08-796-101-46
; Sequence 46, Application US/08796101
; Patent No. 6183752
; GENERAL INFORMATION:
; APPLICANT: EPSTEIN, STEPHEN E.
; APPLICANT: FINKEL, TOREN
; APPLICANT: SPEIR, EDITH
; APPLICANT: ZHOU, XI FU
; APPLICANT: ZHU, JIANHUI
; APPLICANT: ERDILE, LORNE
; APPLICANT: PINCUS, STEVEN
; TITLE OF INVENTION: RESTENOSIS/ATHEROSCLEROSIS DIAGNOSIS,
; TITLE OF INVENTION: PROPHYLAXIS AND THERAPY
; NUMBER OF SEQUENCES: 184
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: CURTIS, MORRIS & SAFFORD, P.C.
; STREET: 530 FIFTH AVENUE
; CITY: NEW YORK
; STATE: NY
; COUNTRY: USA
; ZIP: 10036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/796,101
; FILING DATE: 05-FEB-1997
; CLASSIFICATION: 424
; ATTORNEY/AGENT INFORMATION:
; NAME: KOWALSKI, THOMAS J.
; REGISTRATION NUMBER: 32,147
; TELECOMMUNICATION INFORMATION:

```

```

; TELEPHONE: (212) 840-3333
; TELEFAX: (212) 764-5574
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1182 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-796-101-46

Query Match      100.0%; Score 1179; DB 1; Length 1182;
Best Local Similarity 100.0%; Pred. No. 0.00062;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ATGAGGAGCGCAGTCAGATCCTAGCGTCGAGCCCTCTGAGTCAGGAAACATTTTCA 60
Db 1 ATGAGGAGCGCAGTCAGATCCTAGCGTCGAGCCCTCTGAGTCAGGAAACATTTTCA 60
QY 61 GACCTATGAAACTACTTCTTGAACAAACGTTCTGTCCTCCCTTGCCTGCCAAGCAATG 120
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Db 721 TCCTCATGGGCGGATGAAACCGAGGCGCCATCCCTCACCATCATCACTGGAAGACTCC 780
QY 781 AGTGTATCTACTCGGAGGAAAGAGTCTTGAAGTGGCGTGTGTTGTCCTGTCTGGGAGA 840
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 Qy 901 CCAGGGAGCACTAAGCGAGCACTGCCAAACACACAGCTCCTTCCCCAGCCAAAGAG 960
 Db 901 CCAGGGAGCACTAAGCGAGCACTGCCAAACACACAGCTCCTTCCCCAGCCAAAGAG 960
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 Qy 1021 TTCCGAGAGCTGAATGAGCGCTTGAACCTCAAGATGCCAGGCTGGGAAGAGCAGGG 1080
 Db 1021 TTCCGAGAGCTGAATGAGCGCTTGAACCTCAAGATGCCAGGCTGGGAAGAGCAGGG 1080
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 Db 1081 GGGAGCAGGCTCACTCCAGGCACCTGAAGTCCAAAAGGGTCACTTACCTCCCGCCAT 1140
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RESULT 4

US-08-460-736-215
 ; Sequence 215, Application US/08460736
 ; Patent No. 6265189
 ; GENERAL INFORMATION:
 ; APPLICANT: Paoletti, Enzo
 ; APPLICANT: Tartaglia, James
 ; APPLICANT: Cox, William I.
 ; TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
 ; NUMBER OF SEQUENCES: 217
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESS: Curtis, Morris & Safford
 ; STREET: 530 Fifth Avenue
 ; CITY: New York
 ; STATE: NY
 ; COUNTRY: USA
 ; ZIP: 10036
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/460,736
 ; FILING DATE: 02-JUN-1995
 ; CLASSIFICATION: 514
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/184,009
 ; FILING DATE: 19-JAN-1994
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Frommer, William S.
 ; REGISTRATION NUMBER: 25,506
 ; REFERENCE/DOCKET NUMBER: 454310-2530
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (212) 840-3333
 ; TELEFAX: (212) 840-0712
 ; TELEX: 425066CURTMS
 ; INFORMATION FOR SEQ ID NO: 215:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 1182 base pairs
 ; TYPE: nucleic acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: cDNA
 ; US-08-460-736-215

Query Match 100.0%; Score 1179; DB 1; Length 1182;
 Best Local Similarity 100.0%; Pred. No. 0.00062;
 Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAGAGGCGCAGTCTAGCTCAGATCTTAGCTGAGCCCTCTAGTCTAGGAAACATTTTCA 60
 Db 1 ATGAGAGGCGCAGTCTAGCTCAGATCTTAGCTGAGCCCTCTAGTCTAGGAAACATTTTCA 60
 Qy 61 GACCTATGGAACCTACTTCTCTGAAAAAACAAGTTCTGTCTCCCTTGGCGTCCCAAGCAATG 120
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 Qy 181 GATGAAGCTCCAGAAATGCCAGAGCTGCTCCCGCGTGGCCCTTGCACACAGCAGCTCCT 240
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 Qy 241 ACACGGGGGGCCCTGACACAGCCCTTCTGGCCCTTCTATCTTCTGCTCCCTCCAG 300
 Db 241 ACACGGGGGGCCCTTGCACAGCCCTTCTGGCCCTTCTATCTTCTGCTCCCTCCAG 300
 Qy 301 AAAACCTACAGGCGAGCTACGTTTCCTGCTGGGCTTCTTGCAATCTGGGACAGCCAAAG 360
 Db 301 AAAACCTACAGGCGAGCTACGTTTCCTGCTGGGCTTCTTGCAATCTGGGACAGCCAAAG 360
 Qy 361 TCTGTGACTTGCAGTACTCCCTCTCCCTCAACAGATGTTTGGCAATCTGGCCAAAGACC 420
 Db 361 TCTGTGACTTGCAGTACTCCCTCTCCCTCAACAGATGTTTGGCAATCTGGCCAAAGACC 420
 Qy 421 TGCCCTGTGAGCTGTGGGTTGATTCACACCCCGCGGACCCGCGTCCGCGCCATG 480
 Db 421 TGCCCTGTGAGCTGTGGGTTGATTCACACCCCGCGGACCCGCGTCCGCGCCATG 480
 Qy 481 GCACTCTACAAGCAGTCAAGCAGATGAGGAGGTTGTGAGGCGTGGCCCAACCATGAG 540
 Db 481 GCACTCTACAAGCAGTCAAGCAGATGAGGAGGTTGTGAGGCGTGGCCCAACCATGAG 540
 Qy 541 CGCTGCTCAGATAGCGATGCTGCGCCCTCTCTAGCATCTTATCCGAGTGAAGAAAT 600
 Db 541 CGCTGCTCAGATAGCGATGCTGCGCCCTCTCTAGCATCTTATCCGAGTGAAGAAAT 600
 Qy 601 TTGCGTGTGAGTATTTGATGACAGAAACATTTTCGACATAGTGTGTGCTGCTTAT 660
 Db 601 TTGCGTGTGAGTATTTGATGACAGAAACATTTTCGACATAGTGTGTGCTGCTTAT 660
 Qy 661 GAGCGCGCTGAGGTTGGCTCTGACTGTACCACTCCACTACAACCTACATGTGTAAACAGT 720
 Db 661 GAGCGCGCTGAGGTTGGCTCTGACTGTACCACTCCACTACAACCTACATGTGTAAACAGT 720
 Qy 721 TCTGCTATGGCGGCGATGAACCGGAGGCGCCCTCTCACCATCATCACTGGAGACTCC 780
 Db 721 TCTGCTATGGCGGCGATGAACCGGAGGCGCCCTCTCACCATCATCACTGGAGACTCC 780
 Qy 781 AGTGTGATCTACTGGGAGCGGACAGCTTTGAGGTGCGGTTTGTGCTGCTGCTGGAGA 840
 Db 781 AGTGTGATCTACTGGGAGCGGACAGCTTTGAGGTGCGGTTTGTGCTGCTGCTGGAGA 840
 Qy 841 GACCGGCGCACAGAGGAGAGAAATCTCCGCAAGAAAGGGAGCCTCACACGAGCTGCC 900
 Db 841 GACCGGCGCACAGAGGAGAGAAATCTCCGCAAGAAAGGGAGCCTCACACGAGCTGCC 900
 Qy 901 CCAGGAGCACTAAGCGAGCACTGCCAAACACACAGCTCCTTCCCGAGCCAAAGAG 960
 Db 901 CCAGGAGCACTAAGCGAGCACTGCCAAACACACAGCTCCTTCCCGAGCCAAAGAG 960
 Qy 961 AAACACCTGGATGGAGAAATATTCACCTTCAGATCCGTGGCGGTGAGCGCTTCGAGATG 1020
 Db 961 AAACACCTGGATGGAGAAATATTCACCTTCAGATCCGTGGCGGTGAGCGCTTCGAGATG 1020
 Qy 1021 TTCCGAGAGCTGAATGAGCGCTTGAACCTCAAGATGCCAGGCTGGGAAGAGCAGGG 1080
 Db 1021 TTCCGAGAGCTGAATGAGCGCTTGAACCTCAAGATGCCAGGCTGGGAAGAGCAGGG 1080
 Qy 1081 GGGAGCAGGCTCACTCCAGGCACCTGAAGTCCAAAAGGGTCACTTACCTCCCGCCAT 1140

Db	1081	GGGAGCAGGGCTCACTCCAGCCACTGAAGTCCAAAAGGTCAGTCTACCTCCCGCCAT	1140
Qy	1141	AAAAAATCATGTTCAAGACAGAGGGCCCTGACTCAGAC	1179
Db	1141	AAAAAATCATGTTCAAGACAGAGGGCCCTGACTCAGAC	1179

RESULT 5

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RESULT 5
US-09-535-370-215
; Sequence 215, Application US/09535370
; Patent No. 6537594
; GENERAL INFORMATION:
; APPLICANT: Paoletti, Enzo
;               Cox, William I.
;               Tartaglia, James
;
; TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
; NUMBER OF SEQUENCES: 217
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford
; STREET: 530 Fifth Avenue
; CITY: New York
; STATE: NY
; COUNTRY: USA
; ZIP: 10036
;
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/535,370
; FILING DATE: 24-Mar-2000
; CLASSIFICATION: <Unknown>
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/460,736
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Frommer, William S.
; REGISTRATION NUMBER: 25,506
; REFERENCE/DOCKET NUMBER: 454310-2530
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 840-3333
; TELEFAX: (212) 840-0712
; TELEX: 425066CURTMS
;
; INFORMATION FOR SEQ ID NO: 215:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1182 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
;
; MOLECULE TYPE: cDNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 215:
US-09-535-370-215

Query Match          100.0%; Score 1179; DB 1; Length 1182;
Best Local Similarity 100.0%; Pred. No. 0.00062;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1  ATGGAGGAGCCGAGTCAGATCCTTAGCGTCGAGCCCCCTTGTAGTCAGGAAACATTTTCA 60
Db      1  ATGGAGGAGCCGAGTCAGATCCTTAGCGTCGAGCCCCCTTGTAGTCAGGAAACATTTTCA 60
QY      61  GACCTTATGAAACTACTCTCGAAAAACAAGTTCTGTCGCCCTTGGCGTCCCAGCAATG 120
Db      61  GACCTTATGAAACTACTCTCGAAAAACAAGTTCTGTCGCCCTTGGCGTCCCAGCAATG 120
QY      121  GATGATTTGATGCTGTCCCGGACGATATTGAACAATGGTTCACTGAAGACCCAGGTCCA 180
Db      121  GATGATTTGATGCTGTCCCGGACGATATTGAACAATGGTTCACTGAAGACCCAGGTCCA 180
QY      191  GATGAAGCTCCAGATGCGCAGGGTGTCTCCCGGTGGGCCCTTGCACCCAGCAGTCCCT 240
Db      191  GATGAAGCTCCAGATGCGCAGGGTGTCTCCCGGTGGGCCCTTGCACCCAGCAGTCCCT 240

```

```
APPLICANT: Tartaglia, James
APPLICANT: Cox, William I.
TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
NUMBER OF SEQUENCES: 217
CORRESPONDENCE ADDRESS:
ADDRESSEE: Curtis, Morris & Safford
STREET: 530 Fifth Avenue
CITY: New York
STATE: NY
COUNTRY: USA
ZIP: 10036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/184,009
FILING DATE: 19-JAN-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Frommer, William S.
REGISTRATION NUMBER: 25,506
REFERENCE/DOCKET NUMBER: 454310-2530
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 840-3333
TELEFAX: (212) 840-0712
TELEX: 425066CURTWS
INFORMATION FOR SEQ ID NO: 103:
SEQUENCE CHARACTERISTICS:
LENGTH: 1484 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cdna
US-08-184-009-103

Query Match 100.0%; Score 1179; DB 1; Length 1484;
Best Local Similarity 100.0%; Pred. No. 0.00049;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ATGGAGGAGCGGAGTCAGATCTCTAGCGTCGAGCCCGCTCTGAGTCAGGAAACATTTTCA 60
Db 233 ATGGAGGAGCGGAGTCAGATCTCTAGCGTCGAGCCCGCTCTGAGTCAGGAAACATTTTCA 292
QY 61 GACCTATGGAACACTCTTCTGAAAAACAAGTTCTGTCCTCCCGCTTGGCGTCCCAAGCAATG 120
Db 293 GACCTATGGAACACTCTTCTGAAAAACAAGTTCTGTCCTCCCGCTTGGCGTCCCAAGCAATG 352
QY 121 GATGATTTGATGTCGTCCTCCCGGAGCATATTGACATGTTTCACTGAAGACCCAGGTCCA 180
Db 353 GATGATTTGATGTCGTCCTCCCGGAGCATATTGACATGTTTCACTGAAGACCCAGGTCCA 412
QY 181 GATGAAGCTCCCAAGATGCCAGAGGCTGCTCCCGCGTGGCCCGCTCCACAGCAGCTCCT 240
Db 413 GATGAAGCTCCCAAGATGCCAGAGGCTGCTCCCGCGTGGCCCGCTCCACAGCAGCTCCT 472
QY 241 ACAACCGGCGCCCTGCACAGCCCGCTCTGCGCCCTGTCATCTTCTGTCCCTTCCAG 300
Db 473 ACAACCGGCGCCCTGCACAGCCCGCTCTGCGCCCTGTCATCTTCTGTCCCTTCCAG 532
QY 301 AAAACCTACAGGCGAGTACGTTTCGGTCTGGGCTTCTTGATCTGGGACGCAAG 360
Db 533 AAAACCTACAGGCGAGTACGTTTCGGTCTGGGCTTCTTGATCTGGGACGCAAG 592
QY 361 TCTGTGACTTGCAGTACTCCCTTCCCTCAACAAGATGTTTGGCAACTGGGCAAGACC 420
Db 593 TCTGTGACTTGCAGTACTCCCTTCCCTCAACAAGATGTTTGGCAACTGGGCAAGACC 652
QY 421 TGCCCTGTGAGTGTGGGTGATTCACACCCCGCGCGGACCGCGTCCCGGCCATG 480
Db 653 TGCCCTGTGAGTGTGGGTGATTCACACCCCGCGCGGACCGCGTCCCGGCCATG 712
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QY 481 GCCATCTACAAGCAGTCACAGCACATGACGAGGTTGTGAGGCGCTGCCCCACCATGAG 540
Db 713 GCCATCTACAAGCAGTCACAGCACATGACGAGGTTGTGAGGCGCTGCCCCACCATGAG 772
QY 541 CGCTGCTCAGATAGCGATGGTGTGGCCCTCTCAGCATCTTATCCGAGTGGAGGAAT 600
Db 773 CGCTGCTCAGATAGCGATGGTGTGGCCCTCTCAGCATCTTATCCGAGTGGAGGAAT 832
QY 601 TTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTCGACATAGTGTGGTGGTGCCTAT 660
Db 833 TTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTCGACATAGTGTGGTGGTGCCTAT 892
QY 661 GAGCGCGCTGAGGTTGGCTCTGACTGTACCAACCATCCACTACATCATGTGTAAACGT 720
Db 893 GAGCGCGCTGAGGTTGGCTCTGACTGTACCAACCATCCACTACATCATGTGTAAACGT 952
QY 721 TCCTGATGGCGGCGATGAACCGGAGGCCCATCTCCACATCATCACACTCGAGACTCC 780
Db 953 TCCTGATGGCGGCGATGAACCGGAGGCCCATCTCCACATCATCACACTCGAGACTCC 1012
QY 781 AGTGTATCTACTGGGACGGAACAGCTTTTTCAGGTGCGTGTGTTGTGCTGCTGCGGAGA 840
Db 1013 AGTGTATCTACTGGGACGGAACAGCTTTTTCAGGTGCGTGTGTTGTGCTGCTGCGGAGA 1072
QY 841 GACCGCGCACAGAGGAAAGAAATCTCCGCAAGAAAGGGAGCGCTCACACAGAGCTGCC 900
Db 1073 GACCGCGCACAGAGGAAAGAAATCTCCGCAAGAAAGGGAGCGCTCACACAGAGCTGCC 1132
QY 901 CCAGGAGGACTAAGCGAGACTGCCCAACACACAGCTCTCTCCCGAGCCAAAGAG 960
Db 1133 CCAGGAGGACTAAGCGAGACTGCCCAACACACAGCTCTCTCCCGAGCCAAAGAG 1192
QY 961 AAACCACTGGATGGAGAAATTTTACCCCTTCAGATCCGTGGGCGTGAGCGTTTCGAGATG 1020
Db 1193 AAACCACTGGATGGAGAAATTTTACCCCTTCAGATCCGTGGGCGTGAGCGTTTCGAGATG 1252
QY 1021 TTCCGAGAGCTGAATGAGGCTTTGAACTCAAGAGATGCCAGGCTGGGAGGAGCCAGGG 1080
Db 1253 TTCCGAGAGCTGAATGAGGCTTTGAACTCAAGAGATGCCAGGCTGGGAGGAGCCAGGG 1312
QY 1081 GGGAGAGGCTCATTCCAGCCACCTGAGTCCCAAAAGGTCAGTCTACCTCCGCGCAT 1140
Db 1313 GGGAGAGGCTCATTCCAGCCACCTGAGTCCCAAAAGGTCAGTCTACCTCCGCGCAT 1372
QY 1141 AAAAATCTATCTTCAAGACAGAGGCGCTGACTCAGAC 1179
Db 1373 AAAAATCTATCTTCAAGACAGAGGCGCTGACTCAGAC 1411
```

RESULT 7

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US-08-458-356-103
; Sequence 103, Application US/08458356
; Patent No. 5942235
; GENERAL INFORMATION:
; APPLICANT: Paoletti, Enzo
; APPLICANT: Tartaglia, James
; APPLICANT: Cox, William I.
; TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
; NUMBER OF SEQUENCES: 217
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford
; STREET: 530 Fifth Avenue
; CITY: New York
; STATE: NY
; COUNTRY: USA
; ZIP: 10036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/458,356
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; FILING DATE: 02-JUN-1995
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/184,009
; FILING DATE: 19-JAN-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Frommer, William S.
; REGISTRATION NUMBER: 25,506
; REFERENCE/DOCKET NUMBER: 454310-2530
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 840-3333
; TELEFAX: (212) 840-0712
; TELEX: 425066CURTMS
; INFORMATION FOR SEQ ID NO: 103:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1484 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
US-08-458-356-103

Query Match
Best Local Similarity 100.0%; Score 1179; DB 1; Length 1484;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ATGGAGGAGCGCAGTCTAGCGTCGAGCGCCCTCTGAGTCAGGAAACATTTTCA 60
Db 233 ATGGAGGAGCGCAGTCTAGCGTCGAGCGCCCTCTGAGTCAGGAAACATTTTCA 292

QY 61 GACCTATGGAACACTACTTCTGAAACAAACGTTCTGTCGCCCTTCCCGTCCCAAGCAATG 120
Db 293 GACCTATGGAACACTACTTCTGAAACAAACGTTCTGTCGCCCTTCCCGTCCCAAGCAATG 352

QY 121 GATGATTTGATGCTGTCGCCCGACCATATTGAACATGGTTCACTGAAGACCCAGGTCCA 180
Db 353 GATGATTTGATGCTGTCGCCCGACCATATTGAACATGGTTCACTGAAGACCCAGGTCCA 412

QY 181 GATGAAGCTCCAGAAATGCCAGAGCGTCTGCCCGCGTGGCCCTGACACAGCGCTCCT 240
Db 413 GATGAAGCTCCAGAAATGCCAGAGCGTCTGCCCGCGTGGCCCTGACACAGCGCTCCT 472

QY 241 ACACGGCGGCGCCCTGACACAGCGCCCTCTGCGCCCTGTGATCTTCTGTCCTTCCCG 300
Db 473 ACACGGCGGCGCCCTGACACAGCGCCCTCTGCGCCCTGTGATCTTCTGTCCTTCCCG 532

QY 301 AAAACCTACAGGCGCAGTACGGTTCCGCTCTGGGCTTCTTGCAATCTGGGACAGCCCAAG 360
Db 533 AAAACCTACAGGCGCAGTACGGTTCCGCTCTGGGCTTCTTGCAATCTGGGACAGCCCAAG 592

QY 361 TCTGTGACTTGCAGGTACTCCCTGCCCTCAACAGATGTTTTCGCACTGGCCCAAGACC 420
Db 593 TCTGTGACTTGCAGGTACTCCCTGCCCTCAACAGATGTTTTCGCACTGGCCCAAGACC 652

QY 421 TGCCCTGTGAGCTGTGGTTGATTCACACCCCGCGCCGACCCGCGTCCGCGCCCATG 480
Db 653 TGCCCTGTGAGCTGTGGTTGATTCACACCCCGCGCCGACCCGCGTCCGCGCCCATG 712

QY 481 GCCATCTACAAGCAGTACACGACATGACGAGGTTGTGAGGCGCTGCCCGCCCATGAG 540
Db 713 GCCATCTACAAGCAGTACACGACATGACGAGGTTGTGAGGCGCTGCCCGCCCATGAG 772

QY 541 CGCTGCTCAGATAGCGTGTCTGCCCTCTCAGCATCTTATCCGAGTGGAGGAAT 600
Db 773 CGCTGCTCAGATAGCGTGTCTGCCCTCTCAGCATCTTATCCGAGTGGAGGAAT 832

QY 601 TTGGGTGTGAGTATTTGGATGACAGAAACACTTTTCGACATAGTGTGGTGTGCCCTAT 660
Db 833 TTGGGTGTGAGTATTTGGATGACAGAAACACTTTTCGACATAGTGTGGTGTGCCCTAT 892

QY 661 GAGCGCGCTCAGGTGTGCTGTGACTGTACACCATCCACTACAACTACATGTGTAAACAGT 720
Db 893 GAGCGCGCTCAGGTGTGCTGTGACTGTACACCATCCACTACAACTACATGTGTAAACAGT 952

; FILING DATE: 02-JUN-1995
; Sequence 103 Application US/08460736
; Patent No. 6265189
; GENERAL INFORMATION:
; APPLICANT: Paolletti, Enzo
; APPLICANT: Tartaglia, James
; APPLICANT: Cox, William I.
; TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
; NUMBER OF SEQUENCES: 217
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford
; STREET: 530 Fifth Avenue
; CITY: New York
; STATE: NY
; COUNTRY: USA
; ZIP: 10036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/460,736
; FILING DATE: 02-JUN-1995
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/184,009
; FILING DATE: 19-JAN-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Frommer, William S.
; REGISTRATION NUMBER: 25,506
; REFERENCE/DOCKET NUMBER: 454310-2530
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 840-3333
; TELEFAX: (212) 840-0712
; TELEX: 425066CURTMS
; INFORMATION FOR SEQ ID NO: 103:
; SEQUENCE CHARACTERISTICS:

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[illegible]

```

1141 AAAAAA C T A T T T C A A G A C A G A A G G C C T G A C T C A G A C 1179
|||||
1373 AAAAAA C T A T T T C A A G A C A G A A G G C C T G A C T C A G A C 1411
|||||

RESULT 10
US-08-184-009-99
; Sequence 99, Application US/08184009
; Patent No. 5831975
; GENERAL INFORMATION:
; APPLICANT: Paoletti, Enzo
; APPLICANT: Tagaglia, James
; APPLICANT: Cox, William I.
; TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
; NUMBER OF SEQUENCES: 217
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford
; STREET: 530 Fifth Avenue
; CITY: New York
; STATE: NY
; COUNTRY: USA
; ZIP: 10036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/184,009
; FILING DATE: 19-JAN-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Frommer, William S.
; REGISTRATION NUMBER: 25,506
; REFERENCE/DOCKET NUMBER: 454310-2530
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 840-3333
; TELEFAX: (212) 840-0712
; TELEX: 425066CURTMS
; INFORMATION FOR SEQ ID NO: 99:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1512 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cdna
US-08-184-009-99

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Query Match	100.0%	Score 1179;	DB 1;	Length 1512;
Best Local Similarity	100.0%;	Pred. No. 0.00048;		
Matches 1179; Conservative	0;	Mismatches 0;	Indels 0;	Gaps 0;

Qy	1	ATGAGGAGCGCAGTCAGATCTCTAGCGTCGAGGCCCTCTGAGTCAGAGAACATTTTCA	60
Db	269	ATGAGGAGCGCAGTCAGATCTCTAGCGTCGAGGCCCTCTGAGTCAGAGAACATTTTCA	328
Qy	61	GACCTATGGAACCTACTCTCTGAAAAACAAGTTCTGTCTCCCTTGCCTGCCGTCACCAACAATG	120
Db	329	GACCTATGGAACCTACTCTCTGAAAAACAAGTTCTGTCTCCCTTGCCTGCCGTCACCAACAATG	388
Qy	121	GATGATTGATGTCCTCCCGGACGATATTGAACAATGGTTTCACTGAAGACCCAGGTCCA	180
Db	389	GATGATTGATGTCCTCCCGGACGATATTGAACAATGGTTTCACTGAAGACCCAGGTCCA	448
Qy	181	GATGAAGCTCCCAAGATCCAGAGGCTGTCTCCCGCGTGGCCCTGACACGAGCACTCCT	240
Db	449	GATGAAGCTCCCAAGATCCAGAGGCTGTCTCCCGCGTGGCCCTGACACGAGCACTCCT	508
Qy	241	ACACCGGCGCCCTGCAACGAGCCCTCTCTGGCCCTGTCACTTCTGTGCTCTTCCCGAG	300
Db	509	ACACCGGCGCCCTGCAACGAGCCCTCTCTGGCCCTGTCACTTCTGTGCTCTTCCCGAG	568
Qy	301	AAAACCTACAGGGCAGCTACGGTTTCCGTCCTGGGCTTCTGTGCATTTCTGACAGCCAAG	360

Db 569 AAAACCTACAGGCGAGTACGGTTCCGTTCTGGCTTCTTGCAATTCGGAGAGCCAG 628
QY 361 TCTGTGACTTGCAGTACTCCCTCCGCTCAACAGATGTTTCCCACTGGCCAGACC 420
Db 629 TCTGTGACTTGCAGTACTCCCTCCGCTCAACAGATGTTTCCCACTGGCCAGACC 688
QY 421 TGCCTGTGAGCTGTGGTGTGATTCACACCCCGCCCGCACCGGTCCGGCCATG 480
Db 689 TGCCTGTGAGCTGTGGTGTGATTCACACCCCGCCCGCACCGGTCCGGCCATG 748
QY 481 GCCATCTACAGCAGTACACACATGAGGAGTGTGAGCGCTGCCCCACCATGAG 540
Db 749 GCCATCTACAGCAGTACACACATGAGGAGTGTGAGCGCTGCCCCACCATGAG 808
QY 541 CGCTGTCTCAGATAGGATGGTCTGGCCCTCTCTCAGCATCTTATCCGAGTGGAGAAAT 600
Db 809 CGCTGTCTCAGATAGGATGGTCTGGCCCTCTCTCAGCATCTTATCCGAGTGGAGAAAT 868
QY 601 TTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTCACATAGTGTGGTGGCCCTAT 660
Db 869 TTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTCACATAGTGTGGTGGCCCTAT 928
QY 661 GAGCGCTGTGGAGTATTTGGATGACAGAAACACTTTTCACATAGTGTGGTGGCCCTAT 720
Db 929 GAGCGCTGTGGAGTATTTGGATGACAGAAACACTTTTCACATAGTGTGGTGGCCCTAT 988
QY 721 TCTGTGAGTGTGGAGTATTTGGATGACAGAAACACTTTTCACATAGTGTGGTGGCCCTAT 840
Db 1049 AGTGTGTATCTACTGGGACGGAACAGCTTTGAGGTGCGTGTGTTGCTGTCTGGAGA 1108
QY 841 GAGCGCGCACAGAGAGAGATCTCCGCAAGAGGAGGAGCTCACCACAGAGTGGCC 900
Db 1109 GAGCGCGCACAGAGAGAGATCTCCGCAAGAGGAGGAGCTCACCACAGAGTGGCC 1168
QY 901 CCAGGAGAGCTAAGCGAGCAGTGGCCCAACACACAGCTCTCTCTCCCGAGCAAGAAG 960
Db 1169 CCAGGAGAGCTAAGCGAGCAGTGGCCCAACACACAGCTCTCTCTCCCGAGCAAGAAG 1228
QY 961 AAACCACTGATGGAGATATTTACCTCTCAGATCCGTTGGCGTGGAGCTTCAGATG 1020
Db 1229 AAACCACTGATGGAGATATTTACCTCTCAGATCCGTTGGCGTGGAGCTTCAGATG 1288
QY 1021 TTCCGAGAGCTGAATGAGGCTTTGGAACCTCAAGATGCCAGGCTGGGAGGAGCCAGG 1080
Db 1289 TTCCGAGAGCTGAATGAGGCTTTGGAACCTCAAGATGCCAGGCTGGGAGGAGCCAGG 1348
QY 1081 GGGAGAGGCTCACTCCAGCCACCTGAAGTCAAAAAGGTCAGTCTACCTCCCGCAT 1140
Db 1349 GGGAGAGGCTCACTCCAGCCACCTGAAGTCAAAAAGGTCAGTCTACCTCCCGCAT 1408
QY 1141 AAAAACTATGTTCAAGACAGAGGCTGACTCAGAC 1179
Db 1409 AAAAACTATGTTCAAGACAGAGGCTGACTCAGAC 1447

RESULT 11
US-08-458-356-99
; Sequence 99, Application US/08458356
; Patent No. 5942235
; GENERAL INFORMATION:
; APPLICANT: Paoletti, Enzo
; APPLICANT: Tartaglia, James
; APPLICANT: Cox, William I.
; TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
; NUMBER OF SEQUENCES: 217
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford
; STREET: 530 Fifth Avenue

CITY: New York
STATE: NY
COUNTRY: USA
ZIP: 10036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA: US/08/458,356
FILING DATE: 02-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/184,009
FILING DATE: 19-JAN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Frommer, William S.
REGISTRATION NUMBER: 25,506
REFERENCE/DOCKET NUMBER: 454310-2530
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 840-3333
TELEFAX: (212) 840-0712
TELEX: 425066CURTMS
INFORMATION FOR SEQ ID NO: 99:
SEQUENCE CHARACTERISTICS:
LENGTH: 1512 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
US-08-458-356-99
Query Match 100.0%; Score 1179; DB 1; Length 1512;
Best Local Similarity 100.0%; Pred. No. 0.00048;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 ATGAGGAGGCGGAGTCTAGCTCAGATCTTAGCGTCTGAGCGCCCTCTGAGTCAGGAAACATTTCA 60
Db 269 ATGAGGAGGCGGAGTCTAGCTCAGATCTTAGCGTCTGAGCGCCCTCTGAGTCAGGAAACATTTCA 328
QY 61 GACCTATGAAACTACTTCTTGAACACAGCTTCTGCTCCCTTCTGCTCCGCTCCCAAGCAATG 120
Db 329 GACCTATGAAACTACTTCTTGAACACAGCTTCTGCTCCCTTCTGCTCCGCTCCCAAGCAATG 388
QY 121 GATGATTTGATGCTGCTCCCGGACGATATTGAACATGTTTCACTGAAGACCCAGTCCA 180
Db 389 GATGATTTGATGCTGCTCCCGGACGATATTGAACATGTTTCACTGAAGACCCAGTCCA 448
QY 181 GATGAGCTCCCAAGATGCGAGGCTGTCTCCCGGCTGGCCCTGCGCTGACAGAGCTCCT 240
Db 449 GATGAGCTCCCAAGATGCGAGGCTGTCTCCCGGCTGGCCCTGCGCTGACAGAGCTCCT 508
QY 241 ACACGGGCGGCTGACAGCGCCCTCTGCGCCCTCTGCTCCCTTCTGCTCCCTTCCAG 300
Db 509 ACACGGGCGGCTGACAGCGCCCTCTGCGCCCTCTGCTCCCTTCTGCTCCCTTCCAG 568
QY 301 AAAACCTACAGGCGAGCTACGGTTTCGGTCTGGGCTTCTTGCAATTCGGAGAGCCAG 360
Db 569 AAAACCTACAGGCGAGCTACGGTTTCGGTCTGGGCTTCTTGCAATTCGGAGAGCCAG 628
QY 361 TCTGTGACTTGCAGTACTCCCTCCGCTCAACAGATGTTTTCGCAACTGGCCAGACC 420
Db 629 TCTGTGACTTGCAGTACTCCCTCCGCTCAACAGATGTTTTCGCAACTGGCCAGACC 688
QY 421 TGCCTGTGAGCTGTGGTGTGATTCACACCCCGCCCGCACCGGTCCGGCCATG 480
Db 689 TGCCTGTGAGCTGTGGTGTGATTCACACCCCGCCCGCACCGGTCCGGCCATG 748
QY 481 GCCATCTACAGCAGTACACACATGAGGAGTGTGAGCGCTGCCCCACCATGAG 540
Db 749 GCCATCTACAGCAGTACACACATGAGGAGTGTGAGCGCTGCCCCACCATGAG 808

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QY 541 CGCTGCTCAGATAGCGGATGCTGGGCCCTCTCCTCAGCATCTTATCCGAGTGAAGAAAT 600
Db 809 CGCTGCTCAGATAGCGGATGCTGGGCCCTCTCCTCAGCATCTTATCCGAGTGAAGAAAT 868
QY 601 TTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTCGACATAGTGTGGTGGTCCCTAT 660
Db 869 TTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTCGACATAGTGTGGTGGTCCCTAT 928
QY 661 GAGCGCCCTGAGGTTGGCTCTGACTGTACCAACATCCATACAACTACATGTGTAAACAT 720
Db 929 GAGCGCCCTGAGGTTGGCTCTGACTGTACCAACATCCATACAACTACATGTGTAAACAT 988
QY 721 TCTGTCATGGCGGCATGACCGAGGCGCCATCCTCACCATCATCACCTGGAAGACTCC 780
Db 989 TCTGTCATGGCGGCATGACCGAGGCGCCATCCTCACCATCATCACCTGGAAGACTCC 1048
QY 781 AGTGGTAACTACTTGGAGCGGAACAGCTTTGAGGTGGTGTGGTGGTGGTGGTGGTGG 840
Db 1049 AGTGGTAACTACTTGGAGCGGAACAGCTTTGAGGTGGTGTGGTGGTGGTGGTGGTGG 1108
QY 841 GACCGCGCACAGAGGAAGAGAAATCTCCGCAAGAAAGGAGGAGCTTCAACACAGCTGCC 900
Db 1109 GACCGCGCACAGAGGAAGAGAAATCTCCGCAAGAAAGGAGGAGCTTCAACACAGCTGCC 1168
QY 901 CCAGGAGCACTAAGCGAGCACTGCCCAACACACAGCTCTCTCCCCAGCAAGAAAG 960
Db 1169 CCAGGAGCACTAAGCGAGCACTGCCCAACACACAGCTCTCTCCCCAGCAAGAAAG 1228
QY 961 AAACCACTGGATGGAGAAATATTTACCCCTTCAGATCCGTTGGGCGTTCAGATG 1020
Db 1229 AAACCACTGGATGGAGAAATATTTACCCCTTCAGATCCGTTGGGCGTTCAGATG 1080
QY 1021 TTCCGAGAGCTGAATGAGGCTTGGAACTCAAGGATGCCAGGCTGGGAAGGAGCCAGG 1080
Db 1289 TTCCGAGAGCTGAATGAGGCTTGGAACTCAAGGATGCCAGGCTGGGAAGGAGCCAGG 1348
QY 1081 GGGAGCAGGCTCACTCAGGCACTGAACTGCTGAACTCAAGGATGCCAGGCTGGGAAGGAGCCAGG 1140
Db 1349 GGGAGCAGGCTCACTCAGGCACTGAACTGCTGAACTCAAGGATGCCAGGCTGGGAAGGAGCCAGG 1408
QY 1141 AAAAACACTCATGTTCAACAGAGAGGCGCTCACTCAGAC 1179
Db 1409 AAAAACACTCATGTTCAACAGAGAGGCGCTCACTCAGAC 1447

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RESULT 12

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US-08-460-736-99
; Sequence 99, Application US/08460736
; Patent No. 6265189
; GENERAL INFORMATION:
; APPLICANT: Paoletti, Enzo
; APPLICANT: Tartaglia, James
; APPLICANT: Cox, William I.
; TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
; NUMBER OF SEQUENCES: 217
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford
; STREET: 530 Fifth Avenue
; CITY: New York
; STATE: NY
; COUNTRY: USA
; ZIP: 10036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/460,736
; FILING DATE: 02-JUN-1995
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/184,009

```

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; FILING DATE: 19-JAN-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Frommer, William S.
; REGISTRATION NUMBER: 25,506
; REFERENCE/DOCKET NUMBER: 454310-2530
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 840-3333
; TELEFAX: (212) 840-0712
; TELEX: 425066CURTMS
; INFORMATION FOR SEQ ID NO: 99:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1512 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; US-08-460-736-99

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Query Match      100.0%; Score 1179; DB 1; Length 1512;
Best Local Similarity 100.0%; Pred. No. 0.00048;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ATGGAGAGCGCGAGCTCAGATCCTAGCGTGGAGCGCCCTCTGAGTCAGAGAAACATTTTCA 60
Db 269 ATGGAGAGCGCGAGCTCAGATCCTAGCGTGGAGCGCCCTCTGAGTCAGAGAAACATTTTCA 328
QY 61 GACCTATGAAACTACTTCTGAAACAAACGTTCTGTCCCCCTTCCCGTCCCAAGCAATG 120
Db 329 GACCTATGAAACTACTTCTGAAACAAACGTTCTGTCCCCCTTCCCGTCCCAAGCAATG 388
QY 121 GATGATTTGATGCTGTCCCGGACGATATTGAACAAATGGTTCACTGAAGACCCAGTCCA 180
Db 389 GATGATTTGATGCTGTCCCGGACGATATTGAACAAATGGTTCACTGAAGACCCAGTCCA 448
QY 181 GATGAAGCTCCAGAAATGCCAGAGGCTGCTCCCGCGTGGCGCCCTGACACGAGCTCCT 240
Db 449 GATGAAGCTCCAGAAATGCCAGAGGCTGCTCCCGCGTGGCGCCCTGACACGAGCTCCT 300
QY 241 ACACGGCGGCCCTTGACACAGCCCTCTCTGGCCCTGTCTCTGTCTGCTCCCTTCCCGAG 568
Db 509 ACACGGCGGCCCTTGACACAGCCCTCTCTGGCCCTGTCTCTGTCTGCTCCCTTCCCGAG 628
QY 301 AAAACCTACAGGCGAGCTACGGTTTCGGTCTGGGCTTCTTGCATTTGGGACAGCCAAAG 688
Db 569 AAAACCTACAGGCGAGCTACGGTTTCGGTCTGGGCTTCTTGCATTTGGGACAGCCAAAG 748
QY 361 TCTGTGACTTGCACGTACTCCCTGCGCTCAACAGATGTTTGGCCAACTGGCCAGACC 420
Db 629 TCTGTGACTTGCACGTACTCCCTGCGCTCAACAGATGTTTGGCCAACTGGCCAGACC 480
QY 421 TGCCCTGTGAGCTGTGGTGTGATTTCCACACCCCGCGCGCACCCCGCTCCGCGCCATG 540
Db 689 TGCCCTGTGAGCTGTGGTGTGATTTCCACACCCCGCGCGCACCCCGCTCCGCGCCATG 600
QY 481 GCCATCTACAGCAGTACAGACATGACGAGGTTGTGAGGCGCTGCCCGCCACCATGAG 808
Db 749 GCCATCTACAGCAGTACAGACATGACGAGGTTGTGAGGCGCTGCCCGCCACCATGAG 868
QY 541 CGCTGTCTCAGATAGCGATGCTGGCGCCCTCCTCAGCATCTTATCCGAGTGAAGAAAT 660
Db 809 CGCTGTCTCAGATAGCGATGCTGGCGCCCTCCTCAGCATCTTATCCGAGTGAAGAAAT 720
QY 601 TTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTCGACATAGTGTGGTGGTCCCTAT 928
Db 869 TTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTCGACATAGTGTGGTGGTCCCTAT 988
QY 661 GAGCGCCCTGAGGTTGGCTCTGACTGTACCAACATCCATACAACTACATGTGTAAACAT 1048
Db 929 GAGCGCCCTGAGGTTGGCTCTGACTGTACCAACATCCATACAACTACATGTGTAAACAT 1108
QY 721 TCTGTCATGGCGGCATGACCGAGGCGCCATCCTCACCATCATCACCTGGAAGACTCC 1179
Db 989 TCTGTCATGGCGGCATGACCGAGGCGCCATCCTCACCATCATCACCTGGAAGACTCC 1248

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Db      1229 AAACCACTGGATGGAATATTTTACCCCTTCAGATCGTGGCGTGGAGGCTTCGAGATG 1288
QY      1021 TTCCGAGAGCTGAATGAGGCTTTGGAACCTCAAGGATGCCAGGCTGGGAAGGAGCCAGG 1080
Db      1289 TTCCGAGAGCTGAATGAGGCTTTGGAACCTCAAGGATGCCAGGCTGGGAAGGAGCCAGG 1348
QY      1081 GGGAGCAGGCTCACTCCAGCCACCTGAAGTCCAAAAGGCTCAGTCTACCTCCGCCCAT 1140
Db      1349 GGGAGCAGGCTCACTCCAGCCACCTGAAGTCCAAAAGGCTCAGTCTACCTCCGCCCAT 1408
QY      1141 AAAAACTCATGTTCAAGCAGAGGCTGACTCAGAC 1179
Db      1409 AAAAACTCATGTTCAAGCAGAGGCTGACTCAGAC 1447

RESULT 14
US-08-184-009-215/c
; Sequence 215, Application US/08184009
; Patent No. 5833975
; GENERAL INFORMATION:
; APPLICANT: Paoletti, Enzo
; APPLICANT: Tartaglia, James
; APPLICANT: Cox, William I.
; TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
; NUMBER OF SEQUENCES: 217
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford
; STREET: 530 Fifth Avenue
; CITY: New York
; STATE: NY
; COUNTRY: USA
; ZIP: 10036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/184,009
; FILING DATE: 19-JAN-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Frommer, William S.
; REGISTRATION NUMBER: 25,506
; REFERENCE/DOCKET NUMBER: 454310-2530
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 840-3333
; TELEFAX: (212) 840-0712
; TELEX: 425066CURTMS
; INFORMATION FOR SEQ ID NO: 215:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1182 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cdna
; US-08-184-009-215

Query Match      2.3%; Score 26.6; DB 1; Length 1182;
Best Local Similarity 51.2%; Pred. No. 13;
Matches 62; Conservative 0; Mismatches 59; Indels 0; Gaps 0;

QY      174 AGGTCCAGATGAAGCTCCCAAGATGCCAGAGGCTGCTCCCGGCTGCACCCCTGCACGAGC 233
Db      294 AGGACAGAGATGACAGAGGCCAGGAGGGGCTGGTGCAGAGGGGCCCGCGGTAGGAGC 235
QY      234 AGCTCTACACCGCGGCCCTCGCACAGCCCTCTCTGGCCCTGTCATCTTCTGTCCC 293
Db      234 TGCTGGTGCAGGGGCCACCGCGGGGAGCAGCTCTGGCATCTCTGGAGCTTCACTGGACC 175
QY      294 T 294
Db      174 T 174

Search completed: September 28, 2004, 12:06:14
Job time : 20 secs

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Db      174 T 174

RESULT 15
US-08-458-356-215/c
; Sequence 215, Application US/08458356
; Patent No. 5942235
; GENERAL INFORMATION:
; APPLICANT: Paoletti, Enzo
; APPLICANT: Tartaglia, James
; APPLICANT: Cox, William I.
; TITLE OF INVENTION: RECOMBINANT VIRUS IMMUNOTHERAPY
; NUMBER OF SEQUENCES: 217
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford
; STREET: 530 Fifth Avenue
; CITY: New York
; STATE: NY
; COUNTRY: USA
; ZIP: 10036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/458,356
; FILING DATE: 02-JUN-1995
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/184,009
; FILING DATE: 19-JAN-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Frommer, William S.
; REGISTRATION NUMBER: 25,506
; REFERENCE/DOCKET NUMBER: 454310-2530
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 840-3333
; TELEFAX: (212) 840-0712
; TELEX: 425066CURTMS
; INFORMATION FOR SEQ ID NO: 215:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1182 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cdna
; US-08-458-356-215

Query Match      2.3%; Score 26.6; DB 1; Length 1182;
Best Local Similarity 51.2%; Pred. No. 13;
Matches 62; Conservative 0; Mismatches 59; Indels 0; Gaps 0;

QY      174 AGGTCCAGATGAAGCTCCCAAGATGCCAGAGGCTGCTCCCGGCTGCACCCCTGCACGAGC 233
Db      294 AGGACAGAGATGACAGAGGCCAGGAGGGGCTGGTGCAGAGGGGCCCGCGGTAGGAGC 235
QY      234 AGCTCTACACCGCGGCCCTCGCACAGCCCTCTCTGGCCCTGTCATCTTCTGTCCC 293
Db      234 TGCTGGTGCAGGGGCCACCGCGGGGAGCAGCTCTGGCATCTCTGGAGCTTCACTGGACC 175
QY      294 T 294
Db      174 T 174

Search completed: September 28, 2004, 12:06:14
Job time : 20 secs

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OM nucleic - nucleic search, using sw model

Run on: September 28, 2004, 12:07:16 ; Search time 15 Seconds
(without alignments)
2.663 Million cell updates/sec

Title: SEQ58-252-1430
Perfect score: 1179
Sequence: 1 atggaggagccgagtcaga.....cagaaggcgtgactcagac 1179

Scoring table: IDENTITY NUC

Gapop 10.0, Gapext 0.5

Searched: 10 seqs, 16943 residues

Total number of hits satisfying chosen parameters: 20

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database: ngsdb.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1179	100.0	1182	1 AAQ67884	Human p53 DNA. SY
2	1179	100.0	1182	1 AAQ67884	Human p53 gene. H
3	1179	100.0	1182	1 AAH19387	p53 coding sequence
4	1179	100.0	1484	1 AAQ67884	H6/p53 (wildtype)
5	1179	100.0	1512	1 AAQ67884	H6/p53 (wildtype)
6	1179	100.0	2061	1 AAQ67884	H6/p53 (wildtype)
7	1179	100.0	2367	1 ADD93290	p53-Chk1(1-270) fu
8	1179	100.0	2367	1 ADD93290	p53-SGK(60-431) fu
9	1179	100.0	2385	1 ADD93288	p53-Myt1(1-378) fu
10	1179	100.0	2406	1 ADD93286	p53-Yak3 fusion pr
11	1177.4	99.9	1182	1 AAQ67884	Human p53 DNA. SY
12	26.6	2.3	1182	1 AAQ67884	Human breast cancer
13	26.6	2.3	1182	1 AAQ67884	Human p53 DNA. SY
14	26.6	2.3	1182	1 AAH19387	Human p53 gene. H
15	26.6	2.3	1182	1 AAQ67884	p53 coding sequence
16	26.6	2.3	1484	1 AAQ67884	Human breast cancer
17	26.6	2.3	1512	1 AAQ67884	H6/p53 (wildtype)
18	26.6	2.3	2061	1 ADD93290	H6/p53 (wildtype)
19	26.6	2.3	2367	1 ADD93290	p53-Chk1(1-270) fu
20	26.6	2.3	2385	1 ADD93288	p53-SGK(60-431) fu
	26.6	2.3	2406	1 ADD93286	p53-Myt1(1-378) fu
	26.6	2.3	2406	1 ADD93286	p53-Yak3 fusion pr

ALIGNMENTS

RESULT 1
AAQ67884
ID AAQ67884 standard; DNA; 1182 BP.
XX
AC AAQ67884;
XX
DT 25-MAR-2003 (revised)
DT 23-MAR-1995 (first entry)

XX DE Human p53 DNA.
XX
KW Polymerase chain reaction; primer; amplify; NYVAC; ALVAC; recombinant;
KW murine; interleukin-2; IL-2; pR825; pmut-1; PBS-SK; pM151; TK vector;
KW plasmid; vaccinia; H6 promoter; amplify; primer; antigenic response;
KW polymerase chain reaction; poxvirus; pSD542; immunological response;
KW pathogen; human; interferon; IFN; ss.
XX
OS Synthetic.
XX
XX WO9416716-A1.
XX
XX 04-AUG-1994.
XX
XX 21-JAN-1994; 94WO-US000888.
XX
XX 21-JAN-1993; 93US-00007115.
XX
XX 19-JAN-1994; 94US-00184009.
XX
XX (VIRO-) VIROGENETICS CORP.
XX
XX Paoletti E, Tartaglia J, Cox WI;
XX
XX WPI; 1994-263767/32.
XX
XX Attenuated recombinant virus used for cancer therapy - comprises DNA
XX encoding cytokine and/or tumour associated antigen.
XX
XX Example 32; Fig 39; 232pp; English.
XX
XX This sequence represents the wildtype human p53 gene from the translation
XX initiation codon to the stop codon. This sequence was used in the
XX construction of an ALVAC-based recombinant virus containing a mutant form
XX of the human p53 gene. The mutant form has a G-A substitution at position
XX 524, changing an Arg residue at position 175 to a His residue. The
XX plasmid pM110 (see also AAQ67864) contains the vaccinia H6 promoter and
XX the wild type human p53 gene in the ALVAC C5 insertion site. The mutant
XX p53 gene was obtained from plasmid Cx22A and cloned into pM110 to
XX generate pM1143. Recombination between pM1143 and ALVAC rescuing virus
XX produced recombinant virus vCP270, which contains the vaccinia H6
XX promoted mutated human p53 in the C5 locus. The resulting virus may be
XX used in a composition for inducing an antigenic or immunological
XX response, ie. for immunisation against pathogens. (Updated on 25-MAR-2003
XX to correct PN field.)
XX
XX SQ Sequence 1182 BP; 276 A; 365 C; 307 G; 234 T; 0 U; 0 Other;
XX
XX Query Match 100.0%; Score 1179; DB 1; Length 1182;
XX Best Local Similarity 100.0%; Pred. No. 0.00058;
XX Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
QY 1 ATGAGGAGCGCGAGTCAGATCCTAGCGTCGAGCCCTCTGAGTCAGGAAACATTTTCA 60
DB 1 ATGAGGAGCGCGAGTCAGATCCTAGCGTCGAGCCCTCTGAGTCAGGAAACATTTTCA 60
QY 61 GACCTATGGAACACTACTTCTGAAACACAGTTCTGTCCCTTGGCTCCCAAGCAATG 120
DB 61 GACCTATGGAACACTACTTCTGAAACACAGTTCTGTCCCTTGGCTCCCAAGCAATG 120
QY 121 GATGATTGATGCTGTCCCGGACGATATGAAACAATGGTTCACTGAAGACCCAGGTCCA 180
DB 121 GATGATTGATGCTGTCCCGGACGATATGAAACAATGGTTCACTGAAGACCCAGGTCCA 180
QY 181 GATGAAGCTCCCAAGATGCCAGAGGCTGTCCCGGTCGCGCCCTGCACAGAGTCCT 240
DB 181 GATGAAGCTCCCAAGATGCCAGAGGCTGTCCCGGTCGCGCCCTGCACAGAGTCCT 240
QY 241 ACACCGGCGGCCCTGCACAGAGCCCTCTGTGCGCCCTGTCTCTCTCTCTCTCTCTCC 300
DB 241 ACACCGGCGGCCCTGCACAGAGCCCTCTGTGCGCCCTGTCTCTCTCTCTCTCTCC 300
QY 301 AAAACCTACAGGCGAGCTACGGTTTCCGTCTGGGCTTCTTGCAATCTCGGACGACCAAG 360

Db 301 AAAACCTTACCAGGCGACGTACGGTTTCGGTCTGGGCTTCCTGCAATTCGGAGACGCCAG 360
Qy 361 TCTGTGACTTGCAGTACTCCCTCCCTCAACAGATGTTTCCCAACTGGCCAAAGACC 420
Db 361 TCTGTGACTTGCAGTACTCCCTCCCTCAACAGATGTTTCCCAACTGGCCAAAGACC 420
Qy 421 TGCCCTGTGCAGCTGTGGTGTGATTCACACCCCGCCGCGACCCGGTCCGGCCATG 480
Db 421 TGCCCTGTGCAGCTGTGGTGTGATTCACACCCCGCCGCGACCCGGTCCGGCCATG 480
Qy 481 GCCATCTACAGCAGTACACACATGACGAGGTGTGAGCGCTGCCCCACCATGAG 540
Db 481 GCCATCTACAGCAGTACACACATGACGAGGTGTGAGCGCTGCCCCACCATGAG 540
Qy 541 CGCTGCTCAGATAGGATGTTGCGCCCTCTCAGCATCTTATCCGAGTGGAGGAAT 600
Db 541 CGCTGCTCAGATAGGATGTTGCGCCCTCTCAGCATCTTATCCGAGTGGAGGAAT 600
Qy 601 TTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTTCGACATAGTGTGGTGCCTAT 660
Db 601 TTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTTCGACATAGTGTGGTGCCTAT 660
Qy 661 GAGCGCTCAGTGTGGTCTGACTGTACCCACCATCCACTACATGTAACAGT 720
Db 661 GAGCGCTCAGTGTGGTCTGACTGTACCCACCATCCACTACATGTAACAGT 720
Qy 721 TCTGCTGAGGCGGATGAACCGGAGGCCATCTCCATCATCAGTGGAGAACTCC 780
Db 721 TCTGCTGAGGCGGATGAACCGGAGGCCATCTCCATCATCAGTGGAGAACTCC 780
Qy 781 AGTGTGTAATCTACTGGAGCGAAGACAGCTTTGAGGTGCGTGTGTCCTGCGGAG 840
Db 781 AGTGTGTAATCTACTGGAGCGAAGACAGCTTTGAGGTGCGTGTGTCCTGCGGAG 840
Qy 841 GACCGCGCACAGAGAGAGATCTCCGCAAGAGGCGGCTCACCACGAGCTGCC 900
Db 841 GACCGCGCACAGAGAGAGATCTCCGCAAGAGGCGGCTCACCACGAGCTGCC 900
Qy 901 CCAGGAGCACTAAGCGAGCACTGCCCCAACACACAGCTCTCTCCCGAGCCAAAGAG 960
Db 901 CCAGGAGCACTAAGCGAGCACTGCCCCAACACACAGCTCTCTCCCGAGCCAAAGAG 960
Qy 961 AAACCACTGGATGGAGAAATTTACCTTCAGATCGTGGGCTGAGCTTCGAGATG 1020
Db 961 AAACCACTGGATGGAGAAATTTACCTTCAGATCGTGGGCTGAGCTTCGAGATG 1020
Qy 1021 TTCCGAGAGCTGAATCAGGCTTTGGAACCTCAAGATGCCAGGCTGGAGAGCCAGGG 1080
Db 1021 TTCCGAGAGCTGAATCAGGCTTTGGAACCTCAAGATGCCAGGCTGGAGAGCCAGGG 1080
Qy 1081 GGGAGCAGGCTCACTCCAGCCACCTGAAGTCAAAAGGCTCAGTCTACTCCCGCAT 1140
Db 1081 GGGAGCAGGCTCACTCCAGCCACCTGAAGTCAAAAGGCTCAGTCTACTCCCGCAT 1140
Qy 1141 AAAAACTATGTTCAAGACAGAGGCTGACTCAGAC 1179
Db 1141 AAAAACTATGTTCAAGACAGAGGCTGACTCAGAC 1179

RESULT 2
AAZ08529
ID AAZ08529 standard; DNA; 1182 BP.
XX
AC AAZ08529;
XX
DT 19-OCT-1999 (first entry)
XX
DE Human p53 gene.
KW Attenuated recombinant virus; cytokine; tumour associated antigen;
KW NYVAC recombinant virus; ALVAC recombinant virus; gene therapy; rabies;
KW cancer; tumour necrosis factor; nuclear phosphoprotein; p53; IL-2; GMCSF;
Qy 1 ATGAGGAGCGCGCAGTCAGATCTCTGAGAGCCCTCTGAGTCAGGAACATTTTCA 60
Db 1 ATGAGGAGCGCGCAGTCAGATCTCTGAGAGCCCTCTGAGTCAGGAACATTTTCA 60
Qy 61 GACCTATGGAACACTACTCTCTGGAACACACAGCTTCTGTCCTCCCTGTCGCGTCCCAAGCAATG 120

interleukin; interferon; IFN-gamma; IL-4; melanoma associated antigen; carcinoembryonic antigen; immunisation; antigenic; poxvirus; influenza; immunological response; immunotherapy; vaccine; Newcastle Disease; ss.
Homo sapiens.
US95942235-A.
24-AUG-1999.
02-JUN-1995; 95US-00458356.
24-DEC-1981; 81US-00334456.
08-DEC-1982; 82US-00446824.
19-JUN-1984; 84US-00622135.
27-AUG-1987; 87US-00090209.
28-AUG-1987; 87US-00090711.
20-OCT-1987; 87US-00110335.
25-APR-1988; 88US-00186054.
23-AUG-1988; 88US-00234390.
14-JUN-1990; 90US-00537882.
14-JUN-1990; 90US-00537890.
16-DEC-1991; 91US-00805567.
03-MAR-1992; 92US-00847977.
06-MAR-1992; 92US-00847951.
04-MAY-1992; 92US-00881995.
22-JUL-1992; 92US-00918278.
20-JAN-1993; 93US-00007115.
19-JAN-1994; 94US-00184009.
14-APR-1994; 94US-00228926.
13-SEP-1994; 94US-00306259.
(HEAL-) HEALTH RES INC.
Paoletti E;
WPI; 1999-493494/41.
Recombinant poxviruses comprising exogenous DNA encoding antigenic determinants useful in immunotherapy to immunize against cancers and other diseases such as influenza, Newcastle Disease and rabies.
Example 32; Fig 39; 163pp; English.
The present invention describes a recombinant poxvirus (I), comprising exogenous DNA encoding an antigenic determinant of a pathogen which is then expressed in vivo in infected host cells after administration to a patient and therefore induces an immunological response. (I) may be used to vaccinate patients against a wide range of diseases and disorders depending on the type of antigen encoded by the exogenous DNA. (I) may be used to vaccinate against diseases such as rabies, influenza and Newcastle Disease. It is particularly useful for immunising against lymphocytes and tumour cells for use in cell-based immunotherapeutic modalities for cancer. (I) also provides a means of manipulating unattenuated viruses (attenuation reduces the virulence of the viruses) and known recombinant poxvirus vaccines. This increased level of safety reduces the possibility of a 'runaway' infection in the host and reduces the chance of transmission from vaccinated to unvaccinated individuals and contamination of the environment. The present sequence represents a human p53 gene used in the exemplification of the present invention
Sequence 1182 BP; 276 A; 365 C; 307 G; 234 T; 0 U; 0 Other;
Query Match 100.0%; Score 1179; DB 1; Length 1182;
Best Local Similarity 100.0%; Pred. No. 0.00058;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 ATGAGGAGCGCGCAGTCAGATCTCTGAGAGCCCTCTGAGTCAGGAACATTTTCA 60
Db 1 ATGAGGAGCGCGCAGTCAGATCTCTGAGAGCCCTCTGAGTCAGGAACATTTTCA 60
Qy 61 GACCTATGGAACACTACTCTCTGGAACACACAGCTTCTGTCCTCCCTGTCGCGTCCCAAGCAATG 120

Db 1141 AAAAATCATGTTCAAGACAGAAAGGCGCTGACTCAGAC 1179

RESULT 3
AAH19387

ID AAH19387 standard; cDNA; 1182 BP.

XX
AC AAH19387;

XX
03-AUG-2001 (first entry)

DT
XX
DE p53 coding sequence.

XX
XX Cytostatic; gene therapy; p53; tumour; ss.

KW
XX Unidentified.

XX
XX JP2000354488-A.

PN
XX 26-DEC-2000.

PD
XX
XX 09-APR-1999; 99JP-00139034.

PF
XX
XX 09-APR-1999; 99JP-00139034.

PR
XX
XX (IKAW/) IKAWA H.

PA (SAKA) OTSUKA PHARM CO LTD.

XX
XX
XX WPI; 2001-268293/28.

DR P-PSDB; AAB84836.

XX
XX
XX Chimera gene of the p53 family, useful for gene therapy, and treatment of cancer, comprises a transcription activating region and a DNA binding region.

PT
XX
XX Disclosure; Fig 2; 57pp; Japanese.

XX
XX
XX The present invention relates to a chimera gene of p53 family encoding a transcription activating region, a DNA binding region, and an oligomer formation region of different p53 family proteins. The chimeric gene can be used for gene therapy of p53 variant human tumours, and analysis of the function of the p53 family gene. The present sequence was used in the present invention

XX
XX
XX Sequence 1182 BP; 276 A; 365 C; 307 G; 234 T; 0 U; 0 Other;

Query Match 100.0%; Score 1179; DB 1; Length 1182;
Best Local Similarity 100.0%; Pred. No. 0.00058;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ATGAGGAGCGCGAGTCAGATCCTAGCGTCGAGCGCCCTCTGAGTCAGGAACATTTC 60
DB 1 ATGAGGAGCGCGAGTCAGATCCTAGCGTCGAGCGCCCTCTGAGTCAGGAACATTTC 60

QY 61 GACCTATGGAACACTTCTCTGAAACAAGTTCTGTCCCCCTTGCCGTCCCAAGCAATG 120
DB 61 GACCTATGGAACACTTCTCTGAAACAAGTTCTGTCCCCCTTGCCGTCCCAAGCAATG 120

QY 121 GATGATTTGATGTGTCCTCCCGGACCATATTGAACAATGGTTCACTGAAGACCCAGTCCA 180
DB 121 GATGATTTGATGTGTCCTCCCGGACCATATTGAACAATGGTTCACTGAAGACCCAGTCCA 180

QY 181 GATGAAGCTCCCAAGATGCGAGGCTGTCTCCCGCGTGGCCCTTGACACGACGCTCCT 240
DB 181 GATGAAGCTCCCAAGATGCGAGGCTGTCTCCCGCGTGGCCCTTGACACGACGCTCCT 240

QY 241 ACACCGCGGCCCTGCAACGACCCCTCTCTGGGCCCTGTGTCATCTTGTGCTTCCGAG 300
DB 241 ACACCGCGGCCCTGCAACGACCCCTCTCTGGGCCCTGTGTCATCTTGTGCTTCCGAG 300

QY 301 AAAACCTACCGGCGAGCTACGGTTTCGTTCCGTTCTGGGCTTCTTGCAATCTGGGACAGCCAAG 360
DB 301 AAAACCTACCGGCGAGCTACGGTTTCGTTTCGTTCTGGGCTTCTTGCAATCTGGGACAGCCAAG 360

QY 61 GACCTATGGAACATTAATCTTCTGTAAGAAACAACTGTTCTGTCCCTCCCTGCGTCCGCTCCCAAGCAATG 120
 Db 293 GACCTATGGAACATTAATCTTCTGTAAGAAACAACTGTTCTGTCCCTCCCTGCGTCCGCTCCCAAGCAATG 352
 QY 121 GATGATTGATGCTGTCCTCCCGAGCATATTGAACAATGGTTCTACTGAAGACCCAGGTCCA 180
 Db 353 GATGATTGATGCTGTCCTCCCGAGCATATTGAACAATGGTTCTACTGAAGACCCAGGTCCA 412
 QY 181 GATGAAGCTCCCAAGATGCGCAGAGGCTGCTCCCGGCTGCGGCTGCGGCTGCGGCTGCGGCTGCGGCT 240
 Db 413 GATGAAGCTCCCAAGATGCGCAGAGGCTGCTCCCGGCTGCGGCTGCGGCTGCGGCTGCGGCTGCGGCT 472
 QY 241 ACACCGCGCGCCCTGCAACAGCCCTCTGCGCCCTGTCATCTTCTGTCCCTTCCCGAG 300
 Db 473 ACACCGCGCGCCCTGCAACAGCCCTCTGCGCCCTGTCATCTTCTGTCCCTTCCCGAG 532
 QY 301 AAAACCTACAGGCGAGCTACGGTTTCCTGCTGCGGCTTCTGATTTCTGGGACAGCCAG 360
 Db 533 AAAACCTACAGGCGAGCTACGGTTTCCTGCTGCGGCTTCTGATTTCTGGGACAGCCAG 592
 QY 361 TCTGTGACTTGCACTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 420
 Db 593 TCTGTGACTTGCACTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 652
 QY 421 TGCCTGTGCT 480
 Db 653 TGCCTGTGCT 712
 QY 481 GCCATCTACAAGCAGTACAGCAGCAGTACAGCAGCAGTACAGCAGCAGTACAGCAGCAGTACAGCAGCAG 540
 Db 713 GCCATCTACAAGCAGTACAGCAGCAGTACAGCAGCAGTACAGCAGCAGTACAGCAGCAGTACAGCAGCAG 772
 QY 541 CGCTGCTCAGATAGCGATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 600
 Db 773 CGCTGCTCAGATAGCGATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 832
 QY 601 TTGCGTGTGGATATTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 660
 Db 833 TTGCGTGTGGATATTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 892
 QY 661 GAGCGCGCTGAGTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 720
 Db 893 GAGCGCGCTGAGTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 780
 QY 721 TCCTGCTATGCT 952
 Db 953 TCCTGCTATGCT 780
 QY 781 AGTGGTATCTACTGGGACGAAAGCTTTGAGTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 840
 Db 1013 AGTGGTATCTACTGGGACGAAAGCTTTGAGTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 1072
 QY 841 GACCGCGCGCAGAGGAGAAATCTCGCAGAAAGGGAGCTCTCCACAGGCTCTCCACAGGCTGCGCC 900
 Db 1073 GACCGCGCGCAGAGGAGAAATCTCGCAGAAAGGGAGCTCTCCACAGGCTCTCCACAGGCTGCGCC 1132
 QY 901 CCAGGAGAGCTAAGCGAGCAGCTGCCCAACACACAGCTCTCTCCACAGGCTCTCCACAGGCTGCGCC 960
 Db 1133 CCAGGAGAGCTAAGCGAGCAGCTGCCCAACACACAGCTCTCTCCACAGGCTCTCCACAGGCTGCGCC 1192
 QY 961 AAACCACTGATGAGATATTTTCCCTTCCAGTCCGCTGAGCTGAGCTGAGCTGAGCTGAGCTGAGCTGAGCTGAG 1020
 Db 1193 AAACCACTGATGAGATATTTTCCCTTCCAGTCCGCTGAGCTGAGCTGAGCTGAGCTGAGCTGAGCTGAGCTGAG 1252
 QY 1021 TTCGAGAGCTGAATGAGGCTTGGAACTCAAGATGCCAGGCTCCAGGCTGGAGAGGAGCCAGG 1080
 Db 1253 TTCGAGAGCTGAATGAGGCTTGGAACTCAAGATGCCAGGCTCCAGGCTGGAGAGGAGCCAGG 1312
 QY 1081 GGGAGCAGGCTCACTCCAGCAGCTGAAAGTCCAAAGAGGCTGAGTCTACTCTCCGCGCAT 1140
 Db 1313 GGGAGCAGGCTCACTCCAGCAGCTGAAAGTCCAAAGAGGCTGAGTCTACTCTCCGCGCAT 1372
 QY 1141 AAAAACTCATGTTCAAGACAGAGGCGCTGACTCAGAC 1179

Db 1373 AAAAACTCATGTTCAAGACAGAGGCGCTGACTCAGAC 1411

RESULT 5

AAZ08434
 ID AAZ08434 standard; DNA; 1512 BP.

XX AAZ08434;

XX DT 19-OCT-1999 (first entry)

DE H6/p53 (wildtype) expression cassette and flanking regions from vp1101.

XX Attenuated recombinant virus; cytokine; tumour associated antigen;
 KW NYVAC recombinant virus; ALVAC recombinant virus; gene therapy; rabies;
 KW cancer; tumour necrosis factor; nuclear phosphoprotein; p53; IL-2; GMCSF;
 KW interleukin; interferon; IFN-gamma; IL-4; melanoma associated antigen;
 KW carcinoembryonic antigen; immunisation; antigenic; poxvirus; influenza;
 KW immunological response; immunotherapy; vaccine; Newcastle Disease; ss.

OS Synthetic.

OS Homo sapiens.

OS Vaccinia virus.

PN US5942235-A.

XX 24-AUG-1999.

PD 02-JUN-1995; 95US-00458356.

PR 24-DEC-1981; 81US-00334456.
 PR 08-DEC-1982; 82US-00446824.
 PR 19-JUN-1984; 84US-00622135.
 PR 27-AUG-1987; 87US-00090209.
 PR 28-AUG-1987; 87US-00090711.
 PR 20-OCT-1987; 87US-00110335.
 PR 25-APR-1988; 88US-00186054.
 PR 23-AUG-1988; 88US-00234390.
 PR 14-JUN-1990; 90US-00537882.
 PR 16-DEC-1991; 91US-00805567.
 PR 03-MAR-1992; 92US-00847951.
 PR 06-MAR-1992; 92US-00847951.
 PR 04-MAY-1992; 92US-00881995.
 PR 22-JUL-1992; 92US-00918278.
 PR 20-JAN-1993; 93US-00007115.
 PR 19-JAN-1994; 94US-00184009.
 PR 14-APR-1994; 94US-00228926.
 PR 13-SEP-1994; 94US-00306259.

(HEAL-) HEALTH RES INC.

Paoletti E;

WPI; 1999-493494/41.

Recombinant poxviruses comprising exogenous DNA encoding antigenic determinants useful in immunotherapy to immunize against cancers and other diseases such as influenza, Newcastle Disease and rabies.

Example 15; Fig 17; 163pp; English.

The present invention describes a recombinant poxvirus (I), comprising exogenous DNA encoding an antigenic determinant of a pathogen which is then expressed in vivo in infected host cells after administration to a patient and therefore induces an immunological response. (I) may be used to vaccinate patients against a wide range of diseases and disorders depending on the type of antigen encoded by the exogenous DNA. (I) may be used to vaccinate against diseases such as rabies, influenza and Newcastle Disease. It is particularly useful for immunising against cancers. The poxvirus (I) also provides a means of manipulating lymphocytes and tumour cells for use in cell-based immunotherapeutic

CC modalities for cancer. (I) also have enhanced safety compared to
CC unattenuated viruses (attenuation reduces the virulence of the viruses)
CC and known recombinant poxvirus vaccines. This increased level of safety
CC reduces the possibility of a 'runaway' infection in the host and reduces
CC the chance of transmission from vaccinated to unvaccinated individuals
CC and contamination of the environment. The present sequence represents a
CC H6/p53 (wildtype) expression cassette and flanking regions from vP1101
CC used in the exemplification of the present invention
XX
SQ Sequence 1512 BP; 379 A; 420 C; 379 G; 334 T; 0 U; 0 Other;

Query Match 100.0%; Score 1179; DB 1; Length 1512;
Best Local Similarity 100.0%; Pred. No. 0.00046;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ATGAGGAGCGCGAGTCAGATCTAGCGTCGAGCGCCCTCTGAGTCAGGAACAATTTTCA 60
Db 269 ATGAGGAGCGCGAGTCAGATCTAGCGTCGAGCGCCCTCTGAGTCAGGAACAATTTTCA 328

QY 61 GACCTATGGAACACTCTCTGGAACAACAGTTCCTGCGCCCTTGCCTGCCAGCAATG 120
Db 329 GACCTATGGAACACTCTCTGGAACAACAGTTCCTGCGCCCTTGCCTGCCAGCAATG 388

QY 121 GATGATTTGATCTCTCCCGGACGATATGGAACAATGTTCACTGAAGACCCAGGTCCA 180
Db 389 GATGATTTGATCTCTCCCGGACGATATGGAACAATGTTCACTGAAGACCCAGGTCCA 448

QY 181 GATGAAGCTCCAGAAATCCAGAGCTGTCTCCCGCGTGGCCCTGACACAGCACTCT 240
Db 449 GATGAAGCTCCAGAAATCCAGAGCTGTCTCCCGCGTGGCCCTGACACAGCACTCT 508

QY 241 ACACCGGCGGCCCTGACAGCGCCCTCTCGGCGCCCTGTCACTCTCTCTCCCTCCAG 300
Db 509 ACACCGGCGGCCCTGACAGCGCCCTCTCGGCGCCCTGTCACTCTCTCTCCCTCCAG 568

QY 301 AAAAATACACGAGGAGCTACGGTTTCGCTCTGGGCTTCTGATCTGGGACAGCAAG 360
Db 569 AAAAATACACGAGGAGCTACGGTTTCGCTCTGGGCTTCTGATCTGGGACAGCAAG 628

QY 361 TCTGTGACTTGCACTGCTCTCCCTGCGCTCAACAGATGTTTGCCAACTGGCCAAAGAC 420
Db 629 TCTGTGACTTGCACTGCTCTCCCTGCGCTCAACAGATGTTTGCCAACTGGCCAAAGAC 688

QY 421 TGCCCTGTGAGCTGTGGGTGATTCACACCCCGCGGACCCGCGTCCGCGCATG 480
Db 689 TGCCCTGTGAGCTGTGGGTGATTCACACCCCGCGGACCCGCGTCCGCGCATG 748

QY 481 GCCATCTAAGCAGTCACAGACATGACGAGGTTGTGAGGCGCTGCCCCACCATGAG 540
Db 749 GCCATCTAAGCAGTCACAGACATGACGAGGTTGTGAGGCGCTGCCCCACCATGAG 808

QY 541 CGCTGCTCAGATAGCATGTCTGGCCCTCTCAGCATCTTATCCGAGTGGGAAGAAAT 600
Db 809 CGCTGCTCAGATAGCATGTCTGGCCCTCTCAGCATCTTATCCGAGTGGGAAGAAAT 868

QY 601 TTGCGTGTGAGTATTTGATGACAGAAACACTTTTCGACATAGTGTGGTGGCCCTAT 660
Db 869 TTGCGTGTGAGTATTTGATGACAGAAACACTTTTCGACATAGTGTGGTGGCCCTAT 928

QY 661 GAGCCGCTGAGTGTGGCTCTGACTGTACCAACCATCCACTACACTACATGTGTAAACAGT 720
Db 929 GAGCCGCTGAGTGTGGCTCTGACTGTACCAACCATCCACTACACTACATGTGTAAACAGT 988

QY 721 TCCTGATGGCGGCATGAAACCGGAGGCCCATCTCCACCATCATCACTGGAAGATCC 780
Db 989 TCCTGATGGCGGCATGAAACCGGAGGCCCATCTCCACCATCATCACTGGAAGATCC 1048

QY 781 AGTGGTAACTACTGGACGAGCAAGCTTTGAGTGTGGTGTGCTGTCTGGGAGA 840
Db 1049 AGTGGTAACTACTGGACGAGCAAGCTTTGAGTGTGGTGTGCTGTCTGGGAGA 1108

QY 841 GACCGGCGCACAGAGGAAGAATCTCCGCAAGAAAGGGAGCTCCACAGAGCTGCC 900

Db 1109 GACCGGCGCACAGAGGAAGAATCTCCGCAAGAAAGGGAGGCTCACCAGAGCTGCC 1168
QY 901 CCAGGGAGCACTAAGCGAGCACTGCCCAACAACACACAGCTCCTCTCCCGAGCCAAAG 960
Db 1169 CCAGGGAGCACTAAGCGAGCACTGCCCAACAACACACAGCTCCTCTCCCGAGCCAAAG 1228
QY 961 AAACCACTGGATGAGAAATATTTTCAACCTTTCAGATCCGCTGGGCGTGGAGCGTTCCAGATG 1020
Db 1229 AAACCACTGGATGAGAAATATTTTCAACCTTTCAGATCCGCTGGGCGTGGAGCGTTCCAGATG 1288
QY 1021 TTCCGAGAGCTGAATGAGGCTTGGAACTCAAGATCCAGGCTGGGAGAGCCAGGG 1080
Db 1289 TTCCGAGAGCTGAATGAGGCTTGGAACTCAAGATCCAGGCTGGGAGAGCCAGGG 1348
QY 1081 GGGAGCGGGCTCACTCCAGCCACTGAAGTCCAAAAGAGGTCACTTACCTCCGCGCAT 1140
Db 1349 GGGAGCGGGCTCACTCCAGCCACTGAAGTCCAAAAGAGGTCACTTACCTCCGCGCAT 1408
QY 1141 AAAAATCACTGTTCAGACAGAGGGCTGACTCAGAC 1179
Db 1409 AAAAATCACTGTTCAGACAGAGGGCTGACTCAGAC 1447

RESULT 6
ADD93292
ID ADD93292 standard; cDNA; 2061 BP.
XX AC ADD93292;
XX 29-JAN-2004 (first entry)
XX p53-Chk1(1-270) fusion protein coding sequence.
DE ss; gene; p53-Chk1(1-270); fusion protein; modulation;
XX serine/threonine kinase; phosphorylation; drug design; cancer.
KW Homo sapiens.
XX Key Location/Qualifiers
CDS 1..2061
FT /*tag= a
FT /product= "p53-Chk1(1-270)"
XX WO2003087394-A1.
XX 23-OCT-2003.
XX 15-APR-2003; 2003WO-BP003988.
XX 15-APR-2002; 2002US-0372662P.
XX (GLAX) GLAXO GROUP LTD.
XX Suda M, Shibahara M;
XX WPI; 2003-845339/78.
XX P-PSDB; ADD93291.
XX GENBANK; NM_001274.
XX Identifying a serine/threonine kinase modulator comprises expressing a
PT substrate- serine/threonine kinase fusion protein in a cell, and
PT determining phosphorylation level of the substrate in the presence of a
PT candidate modulator.
XX Claim 7; Page 16; 38pp; English.
PS This sequence encodes a p53-Chk1(1-270) fusion protein. This sequence may
CC be used in the method of the invention for identifying a modulator of a
CC specific serine/threonine kinase. The method comprises expressing a
CC fusion protein between a substrate and a serine/threonine kinase within a
CC cell, and determining the level of phosphorylation of the substrate in
CC the presence of a candidate modulator. The method is useful for screening
CC modulators of serine/threonine kinases. Serine/threonine kinases are

CC useful as targets for drug design, e.g., in the treatment of cancer.
XX

SQ Sequence 2061 BP; 552 A; 521 C; 531 G; 457 T; 0 U; 0 Other;

```
Query Match      100.0%; Score 1179; DB 1; Length 2061;
Best Local Similarity 100.0%; Pred. NO. 0.00034;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps
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QY	1	ATGGAGGACCGCAGTCTAGATCTAGCGTCGAGCCCTCTGAGTCAGGAACAATTTTCA	60
Db	1	ATGGAGGACCGCAGTCTAGATCTAGCGTCGAGCCCTCTGAGTCAGGAACAATTTTCA	60
QY	61	GACCTATGAAACTACTTCTGAAACAAAGTTCTGTCCCTTGCCTGCCCAAGCAATG	120
Db	61	GACCTATGAAACTACTTCTGAAACAAAGTTCTGTCCCTTGCCTGCCCAAGCAATG	120
QY	121	GATGATTTGATCTGTCCCGGACCATATGGAACAATGGTTCACTGAAGACCCAGGTCCA	180
Db	121	GATGATTTGATCTGTCCCGGACCATATGGAACAATGGTTCACTGAAGACCCAGGTCCA	180
QY	181	GATGAAGTCCCGAATGCGCAGAGCTCTCTCCCGCGTGGCCCTGCACACAGCAGTCCCT	240
Db	181	GATGAAGTCCCGAATGCGCAGAGCTCTCTCCCGCGTGGCCCTGCACACAGCAGTCCCT	240
QY	241	ACACCGCGCGCCCTGACACAGCCCTCTGCGGCCCTGTCTCCCGCGTGGCCCTGCCAG	300
Db	241	ACACCGCGCGCCCTGACACAGCCCTCTGCGGCCCTGTCTCCCGCGTGGCCCTGCCAG	300
QY	301	AAAACCTACAGGGCAGCTACGGTTTCGGTCTGGGCTTCTTGCAATCTCTGGCAGCCCAAG	360
Db	301	AAAACCTACAGGGCAGCTACGGTTTCGGTCTGGGCTTCTTGCAATCTCTGGCAGCCCAAG	360
QY	361	TCTGTGACTGACGTACTCCCTGCCCTCAACAAAGATGTTTGGCAATGTTGCCAAGACC	420
Db	361	TCTGTGACTGACGTACTCCCTGCCCTCAACAAAGATGTTTGGCAATGTTGCCAAGACC	420
QY	421	TGCCCTGTGAGCTGTGGGTTGATTCCACACCCCGCCGCGACCCGCTCGCGGCATG	480
Db	421	TGCCCTGTGAGCTGTGGGTTGATTCCACACCCCGCCGCGACCCGCTCGCGGCATG	480
QY	481	GCCATCTACAAGCAGTCACAGCATGACGGAGGTTGTGAGGCGCTGCCCCACCATGAG	540
Db	481	GCCATCTACAAGCAGTCACAGCATGACGGAGGTTGTGAGGCGCTGCCCCACCATGAG	540
QY	541	CGTGTCTCAGATAGCGATGTCTGGCCCTCCCTCAGCATCTTATCCGATGGAAGAAAT	600
Db	541	CGTGTCTCAGATAGCGATGTCTGGCCCTCCCTCAGCATCTTATCCGATGGAAGAAAT	600
QY	601	TTGCGTGTGAGTATTGGATGACAGAAACACTTTTCGACATAGTGTGGTGTGCCCTAT	660
Db	601	TTGCGTGTGAGTATTGGATGACAGAAACACTTTTCGACATAGTGTGGTGTGCCCTAT	660
QY	661	GAGCCGCTGAGGTTGGCTCTGACTGTACCACTCAACTCAATGATGTAAACAGT	720
Db	661	GAGCCGCTGAGGTTGGCTCTGACTGTACCACTCAACTCAATGATGTAAACAGT	720
QY	721	TCTGTCATGGCGGCATGAACCGAGGCGCCATCTCCACCATCATCAGCTGGAAGACTCC	780
Db	721	TCTGTCATGGCGGCATGAACCGAGGCGCCATCTCCACCATCATCAGCTGGAAGACTCC	780
QY	781	AGTGGTAAATCTACTGGGACGGAACAGCTTTGAGGTGGGTTGTGCTGCTGGGAGA	840
Db	781	AGTGGTAAATCTACTGGGACGGAACAGCTTTGAGGTGGGTTGTGCTGCTGGGAGA	840
QY	841	GACCGCGCACAGAGGAAGAAATCTCCGCAAGAAAGGGAGCTTCACACAGCTGCC	900
Db	841	GACCGCGCACAGAGGAAGAAATCTCCGCAAGAAAGGGAGCTTCACACAGCTGCC	900
QY	901	CCAGGAGCACTAAGCGAGCACTGCCCAACAAACACAGCTCTCTCCCCAGCCAAAGAG	960
Db	901	CCAGGAGCACTAAGCGAGCACTGCCCAACAAACACAGCTCTCTCCCCAGCCAAAGAG	960
QY	961	AAACCACTGGATGGAGATAATTTACCCCTTCAGTCCGTGGCGGTGAGCGCTTCGAGATG	1020

RESULT 7

ADD93290
ID ADD93290 standard; cDNA; 2367 BP.

AC ADD93290;

DT 29-JAN-2004 (first entry)

p53-SGK(60-431) fusion protein coding sequence.

ss; gene; p53-SGK(60-431); fusion protein; modulation;
 KW serine/threonine kinase; phosphorylation; drug design; cancer;
 KW
 vv

OS Homo sapiens.

FH	Key	Location/Qualifiers
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100	100	100

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FTT CDS
1. .2367
/*tag= a
/product= "p53-SGK(60-431)"

```

PN WO2003087394-A1.

PD 23-OCT-2003.

15-APR-2003; 2003WO-EP003988.

PR 15-APR-2002; 2002US-0372662P.

PA (GLAX) GLAXO GROUP LTD.

PI Suda M, Shibahara M:

DR WPI; 2003-845339/78.

DR P-PSDB; ADD93289.
DR GENBANK; XM 037046.

xx
PT
PT
PPT
PT
PT
PT
PT

PS Claim 7; Page 15; 38pp; English.

This sequence encodes a p53-SGK(60-431) fusion protein. This sequence may be used in the method of the invention for identifying a modulator of a specific serine/threonine kinase. The method comprises expressing a fusion protein between a substrate and a serine/threonine kinase within a cell, and determining the level of phosphorylation of the substrate in the presence of a candidate modulator. The method is useful for screening modulators of serine/threonine kinases. Serine/threonine kinases are useful as targets for drug design, e.g., in the treatment of cancer.

Sequence 2367 BP; 578 A; 672 C; 588 G; 529 T; 0 U; 0 Other;

Query Match 100.0%; Score 1179; DB 1; Length 2367;
Best Local Similarity 100.0%; Pred. No. 0.00029;
Matches 1179; Concentration 0.00029

Qy	1	ATGAGGAGCGCAGTCTAGATCTTCTAGGTCGAGCCCTCTGATCGAGAAACATTTTCA	60
Db	1	ATGAGGAGCGCAGTCTAGATCTTCTAGGTCGAGCCCTCTGATCGAGAAACATTTTCA	60
Qy	61	GACCTATGGAACATCTCTCTGAAACAAACGTTCTGTCCTCCCTTGGCGTCCCAAGCAATG	120
Db	61	GACCTATGGAACATCTCTCTGAAACAAACGTTCTGTCCTCCCTTGGCGTCCCAAGCAATG	120
Qy	121	GATGATTTGATGCTCTCCCGGAGCATATTCACAAATGTTTCACTGAAAGACCCAGGTTCA	180
Db	121	GATGATTTGATGCTCTCCCGGAGCATATTCACAAATGTTTCACTGAAAGACCCAGGTTCA	180
Qy	181	GATGAAGCTCCAGAAATCCAGAGGCTCTCCCGCGTGGCCCTGACACAGAGCTCCT	240
Db	181	GATGAAGCTCCAGAAATCCAGAGGCTCTCCCGCGTGGCCCTGACACAGAGCTCCT	240
Qy	241	ACACCGGCGCCCTGACAGCCCTCTCCCGCGTGGCCCTGATCTTCTGCTCCCTCCAG	300
Db	241	ACACCGGCGCCCTGACAGCCCTCTCCCGCGTGGCCCTGATCTTCTGCTCCCTCCAG	300
Qy	301	AAACCTTACAGGCGAGCTACCGTTTCCGTCCTGCGCTTCTTGCATCTGGGACAGCAAG	360
Db	301	AAACCTTACAGGCGAGCTACCGTTTCCGTCCTGCGCTTCTTGCATCTGGGACAGCAAG	360
Qy	361	TCTGTGACTTGCAGCTACTCCCTCTCCCTCAACAGATGTTTGGCACTGGCCAGAC	420
Db	361	TCTGTGACTTGCAGCTACTCCCTCTCCCTCAACAGATGTTTGGCACTGGCCAGAC	420
Qy	421	TGCGCTGTGAGCTGTGGTTGATTTCCACACCCCGCGGACCGCGTCCGCGCATG	480
Db	421	TGCGCTGTGAGCTGTGGTTGATTTCCACACCCCGCGGACCGCGTCCGCGCATG	480
Qy	481	GCCATCTAACAGCTGACAGACATGACGAGGTTGTGAGGCGTGCCTCCACCATGAG	540
Db	481	GCCATCTAACAGCTGACAGACATGACGAGGTTGTGAGGCGTGCCTCCACCATGAG	540
Qy	541	CGCTGTCTAGATAGCGATGCTGCGCCCTCTCAGCATCTTATCCGAGTGGAGAAAT	600
Db	541	CGCTGTCTAGATAGCGATGCTGCGCCCTCTCAGCATCTTATCCGAGTGGAGAAAT	600
Qy	601	TTGCGTGTGAGTATTTGATGACAGAAACATTTTCGACATAGTGTGGTGGCCCTAT	660
Db	601	TTGCGTGTGAGTATTTGATGACAGAAACATTTTCGACATAGTGTGGTGGCCCTAT	660
Qy	661	GAGCGCCTGAGTGTGGCTCTGACTGTACCATCCACTACAACTACATGTGTAAACAGT	720
Db	661	GAGCGCCTGAGTGTGGCTCTGACTGTACCATCCACTACAACTACATGTGTAAACAGT	720
Qy	721	TCCTGATGGCGGCATGAACCGAGGCCCATCTCTACCATCATCATCTGGAGACTCC	780
Db	721	TCCTGATGGCGGCATGAACCGAGGCCCATCTCTACCATCATCATCTGGAGACTCC	780
Qy	781	AGTGGTAACTACTGGACGACAGCTTTGAGTGGCTGTTGCTGCTCTCTGGGAGA	840
Db	781	AGTGGTAACTACTGGACGACAGCTTTGAGTGGCTGTTGCTGCTCTCTGGGAGA	840
Qy	841	GACCGCGCACAGGAGAGATCTCCGCAAGAAAGGGAGGCTCTACACAGCTCCCTCC	900
Db	841	GACCGCGCACAGGAGAGATCTCCGCAAGAAAGGGAGGCTCTACACAGCTCCCTCC	900
Qy	901	CCAGGGAGCTAAGCGAGACTCTCCCAACACACAGCTCTCTCCCGAGCCAAAGAG	960
Db	901	CCAGGGAGCTAAGCGAGACTCTCCCAACACACAGCTCTCTCCCGAGCCAAAGAG	960
Qy	961	AAACCACTGGATGAGATATTTTCCACCTTCCAGATCCGTCGCGCTGAGCGCTTCGAGATG	1020
Db	961	AAACCACTGGATGAGATATTTTCCACCTTCCAGATCCGTCGCGCTGAGCGCTTCGAGATG	1020
Qy	1021	TTCCGAGAGCTGAATGAGGCTTGGAACTCAAGATGCCAGGCTGGGAGGAGCGAGG	1080
Db	1021	TTCCGAGAGCTGAATGAGGCTTGGAACTCAAGATGCCAGGCTGGGAGGAGCGAGG	1080
Qy	1081	GGGAGGAGGCTCACTCCAGCCACCTGAACTCAAAAGGGTCACTACTCCCGCAT	1140
Db	1081	GGGAGGAGGCTCACTCCAGCCACCTGAACTCAAAAGGGTCACTACTCCCGCAT	1140
Qy	1141	AAAAAATCTATGTTCAAGACAGAGGCGCTGACTCAGAC	1179
Db	1141	AAAAAATCTATGTTCAAGACAGAGGCGCTGACTCAGAC	1179

RESULT 8

ADD93288

ID ADD93288 standard; cDNA; 2385 BP.

XX

AC ADD93288;

XX

DT 29-JAN-2004 (first entry)

XX

p53-Myt1(1-378) fusion protein coding sequence.

XX

ss; gene; p53-Myt1(1-378); fusion protein; modulation;

KW

serine/threonine kinase; phosphorylation; drug design; cancer.

KW

XX

OS Homo sapiens.

XX

PH Key Location/Qualifiers

FT CDS

FT 1..2385

FT

FT /tag= a

FT

FT /product= "p53-Myt1(1-378)"

XX

PN WO2003087394-A1.

XX

XX 23-OCT-2003.

XX

PF 15-APR-2003; 2003WO-BP003988.

XX

PR 15-APR-2002; 2002US-0372662P.

XX

XX (GLAX) GLAXO GROUP LTD.

XX

PI Suda M, Shibahara M;

XX

XX WPI; 2003-845339/78.

 DR | P-PSDB; ADD93287. || DR | GENBANK; U56816. |
XX	
PT	Identifying a serine/threonine kinase modulator comprises expressing a
PT	substrate- serine/threonine kinase fusion protein in a cell, and
PT	determining phosphorylation level of the substrate in the presence of a
PT	candidate modulator.
XX	
PS	Claim 7; Page 14; 38pp; English.
XX	
CC	This sequence encodes a p53-Myt1(1-378) fusion protein. This sequence may
CC	be used in the method of the invention for identifying a modulator of a
CC	specific serine/threonine kinase. The method comprises expressing a
CC	fusion protein between a substrate and a serine/threonine kinase within a
CC	cell, and determining the level of phosphorylation of the substrate in
CC	the presence of a candidate modulator. The method is useful for screening
CC	modulators of serine/threonine kinases. Serine/threonine kinases are
CC	useful as targets for drug design, e.g., in the treatment of cancer.
XX	
SQ	Sequence 2385 BP; 466 A; 763 C; 720 G; 436 T; 0 U; 0 Other;
Qy	Query Match
Db	Best Local Similarity 100.0%; Score 1179; DB 1; Length 2385;
Qy	Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db	1 ATGAGGAGCGCAGTCTAGATCTTCTAGGTCGAGCCCTCTGATCGAGAAACATTTTCA 60
Qy	1 ATGAGGAGCGCAGTCTAGATCTTCTAGGTCGAGCCCTCTGATCGAGAAACATTTTCA 60
Db	61 GACCTATGGAACATCTCTCTGAAACAAACGTTCTGTCCTCCCTTGGCGTCCCAAGCAATG 120

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Db      61  GACCTATGAAACTACTTCTGAAAAACAACTTCTGTCCCTTGGCGTCCCAAGCAATG 120
QY      121  GATGATTTGATGCTGTCCCGGACGATATTGAACAATGGTTCACTGAAGACCCAGGTCCA 180
Db      121  GATGATTTGATGCTGTCCCGGACGATATTGAACAATGGTTCACTGAAGACCCAGGTCCA 180
QY      181  GATGAAGCTCCCAAGATGCGAGAGGTGCTCCCGGCTGSCCCCTGCACCCAGCAGTCTCT 240
Db      181  GATGAAGCTCCCAAGATGCGAGAGGTGCTCCCGGCTGSCCCCTGCACCCAGCAGTCTCT 240
QY      241  ACACCGGGCGCCCTGTCACACAGCCCTCTGTGCCCCCTGTATCTTCTGTCCCTTCCAG 300
Db      241  ACACCGGGCGCCCTGTCACACAGCCCTCTGTGCCCCCTGTATCTTCTGTCCCTTCCAG 300
QY      301  AAAACCTACGAGGAGTACGTTTCCGTCTGGGCTTCTTGATCTGSGACAGCCAG 360
Db      301  AAAACCTACGAGGAGTACGTTTCCGTCTGGGCTTCTTGATCTGSGACAGCCAG 360
QY      361  TCTGTGACTTGCACGTACTCCCTGCTGCTCAACAAGATGTTTGGCCAACTGGCCAAAGCC 420
Db      361  TCTGTGACTTGCACGTACTCCCTGCTGCTCAACAAGATGTTTGGCCAACTGGCCAAAGCC 420
QY      421  TGCCCTGTGCACTGTGGGTTGATTCACACCCCGCCCGGACCCGGGTCCGGCCATG 480
Db      421  TGCCCTGTGCACTGTGGGTTGATTCACACCCCGCCCGGACCCGGGTCCGGCCATG 480
QY      481  GCCATCTTCAAGAGCTACAGCACATGACGGAGTTGTGAGCGCTGCCCCCACCACATGAG 540
Db      481  GCCATCTTCAAGAGCTACAGCACATGACGGAGTTGTGAGCGCTGCCCCCACCACATGAG 540
QY      541  CGCTGCTCAGATAGGATGGTCTGSCCCTCTCAGCATCTTATCCGAGTGGAGAAAT 600
Db      541  CGCTGCTCAGATAGGATGGTCTGSCCCTCTCAGCATCTTATCCGAGTGGAGAAAT 600
QY      601  TTGCGTGTGAGTATTTGATGACAGAACTTTTTCACATAGTGTGGTGGTCCCTAT 660
Db      601  TTGCGTGTGAGTATTTGATGACAGAACTTTTTCACATAGTGTGGTGGTCCCTAT 660
QY      661  GAGCGGCTGAGTGTGGTCTGACTGTACCACTACCTACCTACCTACCTACCTACCTACCT 720
Db      661  GAGCGGCTGAGTGTGGTCTGACTGTACCACTACCTACCTACCTACCTACCTACCTACCT 720
QY      721  TCCTGATGGCGCATGAACCGGAGGCCCTTCCACCATCATCATCATCATCATCATCATCAT 780
Db      721  TCCTGATGGCGCATGAACCGGAGGCCCTTCCACCATCATCATCATCATCATCATCATCAT 780
QY      781  AGTGGTAACTTACTGGGACGACAGCTTTGAGTGGTGTGTTGCTGTCTGTGGGAGA 840
Db      781  AGTGGTAACTTACTGGGACGACAGCTTTGAGTGGTGTGTTGCTGTCTGTGGGAGA 840
QY      841  GACCGGCGCACAGAGGAAGATCTCCGCAAGAAAGGAGGCTCACCAAGAGTCC 900
Db      841  GACCGGCGCACAGAGGAAGATCTCCGCAAGAAAGGAGGCTCACCAAGAGTCC 900
QY      901  CCAGGAGGACTAAGCGAGCACTGCCCAACACACAGCTCTCTCCCGGAGCAAGAG 960
Db      901  CCAGGAGGACTAAGCGAGCACTGCCCAACACACAGCTCTCTCCCGGAGCAAGAG 960
QY      961  AAACCACTGATGGAGAAATTTTACCCCTTCAGATCCGTGGGCTGAGCGCTCGAGATG 1020
Db      961  AAACCACTGATGGAGAAATTTTACCCCTTCAGATCCGTGGGCTGAGCGCTCGAGATG 1020
QY      1021  TTCCGAGAGCTGAATGAGGCTTGGAACTCAAGGATGCCAGGCTGGGAGGAGCCAGG 1080
Db      1021  TTCCGAGAGCTGAATGAGGCTTGGAACTCAAGGATGCCAGGCTGGGAGGAGCCAGG 1080
QY      1081  GGGAGCAGGCTCACTTCAGCCACTTGAAGTCCAAAAGGGTCACTACCTCCCGCCAT 1140
Db      1081  GGGAGCAGGCTCACTTCAGCCACTTGAAGTCCAAAAGGGTCACTACCTCCCGCCAT 1140
QY      1141  AAAAACTCATGTTCAAGACAGAGGCTGACTCAGAC 1179
Db      1141  AAAAACTCATGTTCAAGACAGAGGCTGACTCAGAC 1179

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RESULT 9
ADD93286
ID      ADD93286 standard; cDNA; 2406 BP.
XX      AC      ADD93286;
XX      DT      29-JAN-2004 (first entry)
XX      DE      p53-Yak3 fusion protein coding sequence.
XX      KW      ss; gene; p53-Yak3 ; fusion protein; modulation; serine/threonine kinase;
KW      phosphorylation; drug design; cancer.
XX      OS      Homo sapiens.
XX      FH      Key      Location/Qualifiers
FT      CDS      1..2406
FT      /tag= a
FT      /product= "p53-Yak3"
XX      PN      WO2003087394-A1.
XX      PD      23-OCT-2003.
XX      PF      15-APR-2003; 2003WO-EP003988.
XX      PR      15-APR-2002; 2002US-0372662P.
XX      PA      (GLAX ) GLAXO GROUP LTD.
XX      PI      Suda M, Shibahara M;
XX      DR      WPI; 2003-845339/78.
XX      DR      P-PSDB; ADD93285.
XX      DR      GENBANK; AF186773.
XX      PT      Identifying a serine/threonine kinase modulator comprises expressing a
PT      substrate- serine/threonine kinase fusion protein in a cell, and
PT      determining phosphorylation level of the substrate in the presence of a
PT      candidate modulator.
XX      Claim 7; Page 13; 38pp; English.
XX      This sequence encodes a p53-Yak3 fusion protein. This sequence may be
XX      used in the method of the invention for identifying a modulator of a
XX      specific serine/threonine kinase. The method comprises expressing a
XX      fusion protein between a substrate and a serine/threonine kinase within a
XX      cell, and determining the level of phosphorylation of the substrate in
XX      the presence of a candidate modulator. The method is useful for screening
XX      modulators of serine/threonine kinases. Serine/threonine kinases are
XX      useful as targets for drug design, e.g., in the treatment of cancer.
SQ      Sequence 2406 BP; 611 A; 637 C; 622 G; 536 T; 0 U; 0 Other;

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Query Match      100.0%; Score 1179; DB 1; Length 2406;
Best Local Similarity 100.0%; Pred. No. 0.00029;
Matches 1179; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY      1  ATGGAGGAGCGGAGTCAGATCTAGCGTCGAGCCCTCTGAGTCAGGAAACATTTTCA 60
Db      1  ATGGAGGAGCGGAGTCAGATCTAGCGTCGAGCCCTCTGAGTCAGGAAACATTTTCA 60
QY      61  GACCTATGAAACTACTTCTGAAACACAGTCTGTGCCCCCTTGCCTGCCAAGCAATG 120
Db      61  GACCTATGAAACTACTTCTGAAACACAGTCTGTGCCCCCTTGCCTGCCAAGCAATG 120
QY      121  GATGATTTGATGCTGTCCCGGACGATATTGAACAATGGTTCACTGAAGACCCAGGTCCA 180
Db      121  GATGATTTGATGCTGTCCCGGACGATATTGAACAATGGTTCACTGAAGACCCAGGTCCA 180
QY      181  GATGAAGCTCCCAAGATGCGAGAGGTGCTCCCGGCTGSCCCCTGCACCCAGCAGTCTCT 240

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ngs.res

181 GATGAAGCTCCAGATGCCAGAGGCTGCTCCCGCGTGGCCCTGCACGAGAGCTCCT 240
241 ACACCGCGCCCTGACACAGAGCCCTCTCTGCGCCCTGTCATCTCTGTCCTTCCAG 300
241 ACACCGCGCCCTGACACAGAGCCCTCTCTGCGCCCTGTCATCTCTGTCCTTCCAG 300
301 AAAACCTACAGGCGAGTACGGTTTCGCTGCGCTTCTTGATCTCTGGACAGCCAG 360
301 AAAACCTACAGGCGAGTACGGTTTCGCTGCGCTTCTTGATCTCTGGACAGCCAG 360
361 TCTGTGACTTGCAGTACCTCCCTGCTCCCTCAACAGATGTTTTCGCACTGCGCAAGACC 420
361 TCTGTGACTTGCAGTACCTCCCTGCTCCCTCAACAGATGTTTTCGCACTGCGCAAGACC 420
421 TGCCCTGTGAGCTGTGGTTGATTTCCACACCCCGCGCGAGCTGCTCCGCGCCATG 480
421 TGCCCTGTGAGCTGTGGTTGATTTCCACACCCCGCGCGAGCTGCTCCGCGCCATG 480
481 GCCATCTACAGAGCTACAGACATGACGAGGTTGTGAGCGCTGCCCCACCATGAG 540
481 GCCATCTACAGAGCTACAGACATGACGAGGTTGTGAGCGCTGCCCCACCATGAG 540
541 CGCTGCTCAGATGAGTGTGCTGCGCCCTCTCTGAGCATCTTATCCGAGTGAAGAAAT 600
541 CGCTGCTCAGATGAGTGTGCTGCGCCCTCTCTGAGCATCTTATCCGAGTGAAGAAAT 600
601 TTGCGTGTGAGTATTTGATGACAGAAACACTTTTTCGACATGATGTGTGTGCTGCTAT 660
601 TTGCGTGTGAGTATTTGATGACAGAAACACTTTTTCGACATGATGTGTGTGCTGCTAT 660
661 GAGCGCGCTGAGTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 720
661 GAGCGCGCTGAGTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 720
721 TCTGTGATGCGGCGATGAGCGGAGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 780
721 TCTGTGATGCGGCGATGAGCGGAGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 780
781 AGTGGTAACTTACTGGGACGAGCACTTTTGAGTGTGCTGCTGCTGCTGCTGCTGCTGCTG 840
781 AGTGGTAACTTACTGGGACGAGCACTTTTGAGTGTGCTGCTGCTGCTGCTGCTGCTGCTG 840
841 GACCGCGCACAGAGAGAAATCTCCGCAAGAGGAGGCTCACCAGAGCTGCCCC 900
841 GACCGCGCACAGAGAGAGAAATCTCCGCAAGAGGAGGCTCACCAGAGCTGCCCC 900
901 CAGGAGGCACTAAGCGAGCACTGCCCAACACACAGAGCTCTCTCCCGAGCCAAAGAG 960
901 CAGGAGGCACTAAGCGAGCACTGCCCAACACACAGAGCTCTCTCCCGAGCCAAAGAG 960
961 AAACCACTGATGAGAGAAATTTTACCCCTTTCAGATCGTGGGCGTGAGCGCTTCGAGATG 1020
961 AAACCACTGATGAGAGAAATTTTACCCCTTTCAGATCGTGGGCGTGAGCGCTTCGAGATG 1020
1021 TCCGAGAGCTGAATGAGGCTTGGAACTCAAGATGCCAGGCTGGGAGGAGCCAGGG 1080
1021 TCCGAGAGCTGAATGAGGCTTGGAACTCAAGATGCCAGGCTGGGAGGAGCCAGGG 1080
1081 GGGAGCAGGCTCACTCCAGCCACTGAAGTCCAAAAGAGGCTCAGTCTACTCTCCCGCAT 1140
1081 GGGAGCAGGCTCACTCCAGCCACTGAAGTCCAAAAGAGGCTCAGTCTACTCTCCCGCAT 1140
1141 AAAAACTCATGTTTCAAGACAGAGGCGCTGACTCAGAC 1179
1141 AAAAACTCATGTTTCAAGACAGAGGCGCTGACTCAGAC 1179

RESULT 10
ID ADC35154
XX ADC35154 standard; cDNA; 1182 BP.
AC ADC35154;

18-DEC-2003 (first entry)
Human breast cancer antigen polynucleotide seq id 38.
breast cancer; breast cancer diagnosis; breast cancer antigen; gene; ss.
Homo sapiens.
US2003108888-A1.
12-JUN-2003.
15-MAY-2002; 2002US-00146473.
15-MAY-2001; 2001US-0291150P.
(LUDW-) LUDWIG INST CANCER RES.
Scanlan MJ, Gout I, Stockert E, Old LJ, Gure A, Chen Y;
WPI; 2003-829397/77.
P-PSDB; ADC35112.
Diagnosing breast cancer in subject by obtaining biological sample from
subject, contacting sample with breast cancer-associated polypeptides,
determining specific binding between polypeptides and agents in sample.
Claim 1; SEQ ID NO 38; 173pp; English.
The invention describes a method of diagnosing breast cancer in subject
comprising contacting biological sample from subject with at least two
different breast cancer-associated polypeptides (I) encoded by nucleic
acid molecules (II) comprising sequence chosen from 42 fully defined
sequences as given in specification, determining specific binding between
(I) and agents in sample, where presence of the binding is diagnostic for
breast cancer. The method is useful for diagnosing breast cancer in a
subject. The sample is blood, lymph node fluid or breast discharge fluid.
This sequence encodes a breast cancer antigen.

Query Match 99.9%; Score 1177.4; DB 1; Length 1182;
Best Local Similarity 99.9%; Pred. No. 0.00059;
Matches 1178; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
1 ATGGAGGAGCGGAGTACAGTCTAGCGTGCAGAGCCCTCTGAGTCAGGAAACATTTTCA 60
1 ATGGAGGAGCGGAGTACAGTCTAGCGTGCAGAGCCCTCTGAGTCAGGAAACATTTTCA 60
61 GACCTATGGAACACTTCTCTGAAACAAACGTTCTGTCCCTTGCCTGCCAGCAATG 120
61 GACCTATGGAACACTTCTCTGAAACAAACGTTCTGTCCCTTGCCTGCCAGCAATG 120
121 GATGATTGATGTCGTCCCGGAGCGATATGACAAATGTTTCACTGAGACCCAGGTCCA 180
121 GATGATTGATGTCGTCCCGGAGCGATATGACAAATGTTTCACTGAGACCCAGGTCCA 180
181 GATGAGCTCCAGAAATGCCAGAGGTCCTCCCGGCTGCGCCCTGCACAGAGTCTCT 240
181 GATGAGCTCCAGAAATGCCAGAGGTCCTCCCGGCTGCGCCCTGCACAGAGTCTCT 240
241 ACACCGGCGCCCTGCACAGAGCCCTCTGCGCCCTGTCATCTCTGTCCTTCCAG 300
241 ACACCGGCGCCCTGCACAGAGCCCTCTGCGCCCTGTCATCTCTGTCCTTCCAG 300
301 AAAACCTACAGGCGAGTACGGTTTCGCTGCGCTTCTTGATCTCTGGACAGCCAG 360
301 AAAACCTACAGGCGAGTACGGTTTCGCTGCGCTTCTTGATCTCTGGACAGCCAG 360
361 TCTGTGACTTGCAGTACCTCCCTGCTCCCTCAACAGATGTTTTCGCACTGCGCAAGACC 420
361 TCTGTGACTTGCAGTACCTCCCTGCTCCCTCAACAGATGTTTTCGCACTGCGCAAGACC 420

QY 421 TGGCTGTGAGCTGTGGGTGATTCACACCCCGCCGCGACCCCGCTCCGCGCATG 480
 Db |||||
 QY 421 TGGCTGTGAGCTGTGGGTGATTCACACCCCGCCGCGACCCCGCTCCGCGCATG 480
 Db |||||
 QY 481 GCATCTACAGCAGTACACAGCATGACGAGGTTGTGAGGCGCTGCCGCCACCATGAG 540
 Db |||||
 QY 481 GCATCTACAGCAGTACACAGCATGACGAGGTTGTGAGGCGCTGCCGCCACCATGAG 540
 Db |||||
 QY 541 CGTGTCTCAGATAGCGATGCTTGGCCCTCTCCCTCAGCATCTTATCCGAGTGGAGGAAT 600
 Db |||||
 QY 541 CGTGTCTCAGATAGCGATGCTTGGCCCTCTCCCTCAGCATCTTATCCGAGTGGAGGAAT 600
 Db |||||
 QY 601 TTGCGTGTGAGTATTGGATGACGAAACACTTTTCGACATAGTGTGGTGGCCCTAT 660
 Db |||||
 QY 601 TTGCGTGTGAGTATTGGATGACGAAACACTTTTCGACATAGTGTGGTGGCCCTAT 660
 Db |||||
 QY 661 GAGCCGCTTGAGTGTGGCTCTGACTGTACCAATCCATCCTACATCATCAGTGTAAAGT 720
 Db |||||
 QY 661 GAGCCGCTTGAGTGTGGCTCTGACTGTACCAATCCATCCTACATCATCAGTGTAAAGT 720
 Db |||||
 QY 721 TCTGTCATGGCGGATGAAACCGGAGGCGCATCTCCATCATCATCAGTGTAAAGT 780
 Db |||||
 QY 721 TCTGTCATGGCGGATGAAACCGGAGGCGCATCTCCATCATCATCAGTGTAAAGT 780
 Db |||||
 QY 781 AGTGTGTAATCTACTGGGACGGAACAGCTTTGAGGTGCGTGTGTGGTGGGAGA 840
 Db |||||
 QY 781 AGTGTGTAATCTACTGGGACGGAACAGCTTTGAGGTGCGTGTGTGGTGGGAGA 840
 Db |||||
 QY 841 GACCGCGGCACAGAGGAGAGAAATCTCCGCAAGAAAGGAGGAGCTTCCAGAGTGGCC 900
 Db |||||
 QY 841 GACCGCGGCACAGAGGAGAGAAATCTCCGCAAGAAAGGAGGAGCTTCCAGAGTGGCC 900
 Db |||||
 QY 901 CCAGGAGCACTTAAGGAGCACTGCGCCCAACACACAGCTCTCTCCCGAGCAAGAG 960
 Db |||||
 QY 901 CCAGGAGCACTTAAGGAGCACTGCGCCCAACACACAGCTCTCTCCCGAGCAAGAG 960
 Db |||||
 QY 961 AAACCACTGGATGAGAGATATTTACCTTCAGATCCGTGGGCGTGGAGGCTTCAGATG 1020
 Db |||||
 QY 961 AAACCACTGGATGAGAGATATTTACCTTCAGATCCGTGGGCGTGGAGGCTTCAGATG 1020
 Db |||||
 QY 1021 TTCCGAGAGCTGAATGAGGCTTGGAACTCAAGATGCCAGGCTGGGAAAGGAGCCAGG 1080
 Db |||||
 QY 1021 TTCCGAGAGCTGAATGAGGCTTGGAACTCAAGATGCCAGGCTGGGAAAGGAGCCAGG 1080
 Db |||||
 QY 1081 GGGAGAGGGCTCACTCCAGCCACTGAAGTCCAAAGAGGTCAAGTCTACCTCCGCGCAT 1140
 Db |||||
 QY 1081 GGGAGAGGGCTCACTCCAGCCACTGAAGTCCAAAGAGGTCAAGTCTACCTCCGCGCAT 1140
 Db |||||
 QY 1141 AAAAATCTCATTTCAAGACAGAGAGGCGCTGACTCAGAC 1179
 Db |||||
 QY 1141 AAAAATCTCATTTCAAGACAGAGAGGCGCTGACTCAGAC 1179
 Db |||||

RESULT 11

AAQ67884/c
 ID AAQ67884 standard; DNA; 1182 BP.

XX AC AAQ67884;

XX DT 25-MAR-2003 (revised)

XX DT 23-MAR-1995 (first entry)

XX DE Human p53 DNA.

XX KW Polymerase chain reaction; primer; amplify; NYVAC; ALVAC; recombinant;
 KW murine; interleukin-2; IL-2; pR825; pmu-1; PBS-SK; pMM151; TK vector;
 KW plasmid; vaccinia; H6 promoter; amplify; primer; antigenic response;
 KW polymerase chain reaction; poxvirus; p8D542; immunological response;
 KW pathogen; human; interferon; IFN; ss.
 XX OS Synthetic.

PN W09416716-A1.

XX PD 04-AUG-1994.

XX PF 21-JAN-1994; 94WO-US000888.

XX PR 21-JAN-1993; 93US-00007115.

XX PR 19-JAN-1994; 94US-00184009.

XX PA (VIRO-) VIROGENETICS CORP.

XX PI Paoletti E, Tartaglia J, Cox WI;

XX WPI; 1994-263767/32.

XX PT Attenuated recombinant virus used for cancer therapy - comprises DNA
 encoding cytokine and/or tumour associated antigen.

XX PS Example 32; Fig 39; 232pp; English.

XX CC This sequence represents the wildtype human p53 gene from the translation
 initiation codon to the stop codon. This sequence was used in the
 construction of an ALVAC-based recombinant virus containing a mutant form
 of the human p53 gene. The mutant form has a G>A substitution at position
 524, changing an Arg residue at position 175 to a His residue. The
 plasmid pMM110 (see also AAQ67864) contains the vaccinia H6 promoter and
 the wild type human p53 gene in the ALVAC C5 insertion site. The mutant
 p53 gene was obtained from plasmid Cx22A and cloned into pMM110 to
 generate pMM143. Recombination between pMM143 and ALVAC rescuing virus
 produced recombinant virus VCP270, which contains the vaccinia H6
 promoted mutated human p53 in the C5 locus. The resulting virus may be
 used in a composition for inducing an antigenic or immunological
 response, ie. for immunisation against pathogens. (Updated on 25-MAR-2003
 to correct PN field.)

XX SQ Sequence 1182 BP; 276 A; 365 C; 307 G; 234 T; 0 U; 0 Other;

Query Match 2.3%; Score 26.6; DB 1; Length 1182;
 Best Local Similarity 51.2%; Pred. No. 12;

Matches 62; Conservative 0; Mismatches 59; Indels 0; Gaps 0;

QY 174 AGTCCAGATCAAGCTCCAGATGCCAGAGCTGTCCCGCGTGGCCCTGCACACAGC 233
 Db |||||

QY 294 AGGACAGAGATGACAGGGGCCAGAGGGGGCTGTGTCAGGGGCGCGGTGTAGGAGC 235
 Db |||||

QY 234 AGCTCTACACCGCGGCGCCCTGCACCGAGCCCTCTCTGGGCCCTGTCTCTGTCCTC 293
 Db |||||

QY 294 T 294
 Db 174 T 174

RESULT 12

AAZ08529/c

ID AAZ08529 standard; DNA; 1182 BP.

XX AC AAZ08529;

XX DT 19-OCT-1999 (first entry)

XX DE Human p53 gene.

XX KW Attenuated recombinant virus; cytokine; tumour associated antigen;
 KW NYVAC recombinant virus; ALVAC recombinant virus; gene therapy; rabies;
 KW cancer; tumour necrosis factor; nuclear phosphoprotein; p53; IL-2; GM-CSF;
 KW interleukin; interferon; IFN-gamma; IL-4; melanoma associated antigen;
 KW carcinoembryonic antigen; immunisation; antigenic; poxvirus; influenza;
 KW immunological response; immunotherapy; vaccine; Newcastle Disease; ss.
 XX OS Homo sapiens.

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PN US5942235-A.
 XX 24-AUG-1999.
 XX 02-JUN-1995; 95US-00458356.
 XX 24-DEC-1981; 81US-00334456.
 PR 08-DEC-1982; 82US-00446824.
 PR 19-JUN-1984; 84US-00622135.
 PR 27-AUG-1987; 87US-00090209.
 PR 28-AUG-1987; 87US-00090711.
 PR 20-OCT-1987; 87US-00110335.
 PR 25-APR-1988; 88US-00186054.
 PR 23-AUG-1988; 88US-00234390.
 PR 14-JUN-1990; 90US-00537882.
 PR 16-DEC-1991; 91US-00537890.
 PR 03-MAR-1992; 92US-00847977.
 PR 06-MAR-1992; 92US-00847951.
 PR 04-MAY-1992; 92US-00881995.
 PR 22-JUL-1992; 92US-00918278.
 PR 20-JAN-1993; 93US-00007115.
 PR 19-JAN-1994; 94US-00184009.
 PR 14-APR-1994; 94US-00228926.
 PR 13-SEP-1994; 94US-00306259.
 XX (HEAL-) HEALTH RES INC.
 PA Paoletti E;
 XX WPI; 1999-493494/41.
 DR Recombinant poxviruses comprising exogenous DNA encoding antigenic
 PT determinants useful in immunotherapy to immunize against cancers and
 PT other diseases such as influenza, Newcastle Disease and rabies.
 XX Example 32; Fig 39; 163pp; English.
 XX The present invention describes a recombinant poxvirus (I), comprising
 PS exogenous DNA encoding an antigenic determinant of a pathogen which is
 CC then expressed in vivo in infected host cells after administration to a
 CC patient and therefore induces an immunological response. (I) may be used
 CC to vaccinate patients against a wide range of diseases and disorders
 CC depending on the type of antigen encoded by the exogenous DNA. (I) may be
 CC used to vaccinate against diseases such as rabies, influenza and
 CC Newcastle Disease. It is particularly useful for immunising against
 CC cancers. The poxvirus (I) also provides a means of manipulating
 CC lymphocytes and tumour cells for use in cell-based immunotherapeutic
 CC modalities for cancer. (I) also have enhanced safety compared to
 CC unattenuated viruses (attenuation reduces the virulence of the viruses)
 CC and known recombinant poxvirus vaccines. This increased level of safety
 CC reduces the possibility of a 'runaway' infection in the host and reduces
 CC the chance of transmission from vaccinated to unvaccinated individuals
 CC and contamination of the environment. The present sequence represents a
 CC human p53 gene used in the exemplification of the present invention
 XX
 XX Sequence 1182 BP; 276 A; 365 C; 307 G; 234 T; 0 U; 0 Other;
 Query Match 2.3%; Score 26.6; DB 1; Length 1182;
 Best Local Similarity 51.2%; Pred. No. 12;
 Matches 62; Conservative 0; Mismatches 59; Indels 0; Gaps 0;
 QY 174 AGTCCAGATGAAGCTCCAGAGATGCCAGAGGTGCTCCCGGTCGCCCTGCACGAC 233
 Db 294 AGGACAGAGATGACAGAGGCGCCAGGAGGGGCTGGTGCGAGGGGCCCGCGGTAGGAGC 235
 QY 234 AGTCTTACACCGGCGCCCTGCACAGCCCTCTCTGCGCCCTGTCTCTCTCTGTC 293
 Db 234 TGGTGGTGCAGGGGCGCCAGGGGAGGCTCTGGGATCTGGAGGCTTCACTGGACC 175
 QY 294 T 294
 Db 174 T 174

RESULT 13
 AAH19387/c
 ID AAH19387 standard; cDNA; 1182 BP.
 XX
 AC AAH19387;
 XX
 DT 03-AUG-2001 (first entry)
 XX
 DE p53 coding sequence.
 XX
 KW Cytostatic; gene therapy; p53; tumour; ss.
 XX
 OS Unidentified.
 XX
 PN JP2000354488-A.
 XX
 PD 26-DEC-2000.
 XX
 PF 09-APR-1999; 99JP-00139034.
 XX
 PR 09-APR-1999; 99JP-00139034.
 XX
 PA (IKAW/) IKAWA H.
 PA (SAKA) OTSUKA PHARM CO LTD.
 XX
 DR WPI; 2001-268293/28.
 DR P-P5DB; AAB84836.
 XX
 PT Chimera gene of the p53 family, useful for gene therapy, and treatment of
 PT cancer, comprises a transcription activating region and a DNA binding
 PT region.
 XX
 PS Disclosure; Fig 2; 57pp; Japanese.
 XX
 CC The present invention relates to a chimera gene of p53 family encoding a
 CC transcription activating region, a DNA binding region, and an oligomer
 CC formation region of different p53 family proteins. The chimera gene can
 CC be used for gene therapy of p53 variant human tumours, and analysis of
 CC the function of the p53 family gene. The present sequence was used in the
 CC present invention
 XX
 SQ Sequence 1182 BP; 276 A; 365 C; 307 G; 234 T; 0 U; 0 Other;
 Query Match 2.3%; Score 26.6; DB 1; Length 1182;
 Best Local Similarity 51.2%; Pred. No. 12;
 Matches 62; Conservative 0; Mismatches 59; Indels 0; Gaps 0;
 QY 174 AGTCCAGATGAAGCTCCAGAGATGCCAGAGGTGCTCCCGGTCGCCCTGCACGAC 233
 Db 294 AGGACAGAGATGACAGAGGCGCCAGGAGGGGCTGGTGCGAGGGGCCCGCGGTAGGAGC 235
 QY 234 AGTCTTACACCGGCGCCCTGCACAGCCCTCTCTGCGCCCTGTCTCTCTCTGTC 293
 Db 234 TGGTGGTGCAGGGGCGCCAGGGGAGGCTCTGGGATCTGGAGGCTTCACTGGACC 175
 QY 294 T 294
 Db 174 T 174

RESULT 14
 ADC35154/c
 ID ADC35154 standard; cDNA; 1182 BP.
 XX
 AC ADC35154;
 XX
 DT 18-DEC-2003 (first entry)
 XX
 DE Human breast cancer antigen polynucleotide seq id 38.
 DE breast cancer; breast cancer diagnosis; breast cancer antigen; gene; ss.
 KW

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XX OS Homo sapiens.
XX PN US2003108888-A1.
XX PD 12-JUN-2003.
XX PF 15-MAY-2002; 2002US-00146473.
XX PR 15-MAY-2001; 2001US-0291150P.
XX PA (LUDW-) LUDWIG INST CANCER RES.
XX PI Scanlan MJ, Gout I, Stockert E, Old LJ, Gure A, Chen Y;
XX WPI; 2003-829337/77.
XX DR P-PSDB; ADC35112.
XX PT Diagnosing breast cancer in subject by obtaining biological sample from
XX PT subject, contacting sample with breast cancer-associated polypeptides,
XX PT determining specific binding between polypeptides and agents in sample.
XX PS Claim 1; SEQ ID NO 38; 173pp; English.
XX CC The invention describes a method of diagnosing breast cancer in subject
XX CC comprising contacting biological sample from subject with at least two
XX CC different breast cancer-associated polypeptides (I) encoded by nucleic
XX CC acid molecules (II) comprising sequence chosen from 42 fully defined
XX CC sequences as given in specification, determining specific binding between
XX CC (I) and agents in sample, where presence of the binding is diagnostic for
XX CC breast cancer. The method is useful for diagnosing breast cancer in a
XX CC subject. The sample is blood, lymph node fluid or breast discharge fluid.
XX CC This sequence encodes a breast cancer antigen.
XX SQ Sequence 1182 BP; 276 A; 364 C; 308 G; 234 T; 0 U; 0 Other;

Query Match      2.3%; Score 26.6; DB 1; Length 1182;
Best Local Similarity 51.2%; Pred. No. 12;
Matches 62; Conservative 0; Mismatches 59; Indels 0; Gaps 0;

QY 174 AGGTCCAGATGAAGTCCAGATGCCAGAGGCTGCTCCCGCGTGGCCCTGCACGACG 233
Db 294 AGGACAGAGATGACAGGGGCCAGGAGGGGCTGTGTCAGGGGCCCGCGTGTAGGAGC 235
QY 234 AGCTCTACACCGGGCCCTGTGCACGACGACCCCTCTGCGCCCTGTCTCTCTGTCCTC 293
Db 234 TGCTGTCCAGGGGCCACCGCGGAGGAGCCTCTGSCATTCTGGAGCTTCATCTGGACC 175
QY 294 T 294
Db 174 T 174

RESULT 15
AAZ08435/c
ID AAZ08435 standard; DNA; 1484 BP.
XX AC AAZ08435;
XX DT 19-OCT-1999 (first entry)
XX DE H6/p53 (wildtype) expression cassette and flanking regions from vCP207.
XX KW Attenuated recombinant virus; cytokine; tumour associated antigen;
XX KW NYVAC recombinant virus; ALVAC recombinant virus; gene therapy; rabies;
XX KW cancer; tumour necrosis factor; nuclear phosphoprotein; p53; IL-2; GMCSF;
XX KW interleukin; interferon; IFN-gamma; IL-4; melanoma associated antigen;
XX KW carcinoembryonic antigen; immunisation; antigenic; poxvirus; influenza;
XX KW immunological response; immunotherapy; vaccine; Newcastle Disease; ss.
XX OS Synthetic.
XX OS Homo sapiens.
XX OS Vaccinia virus.

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XX US5942235-A.
XX PN 24-AUG-1999.
XX PD 02-JUN-1995; 95US-00458356.
XX PF 24-DEC-1981; 81US-00334456.
XX PR 08-DEC-1982; 82US-00446824.
XX PR 19-JUN-1984; 84US-00622135.
XX PR 27-AUG-1987; 87US-00090209.
XX PR 28-AUG-1987; 87US-00090711.
XX PR 20-OCT-1987; 87US-00110335.
XX PR 25-APR-1988; 88US-00186054.
XX PR 23-AUG-1988; 88US-00234390.
XX PR 14-JUN-1990; 90US-00537882.
XX PR 14-JUN-1990; 90US-00537890.
XX PR 16-DEC-1991; 91US-00805567.
XX PR 03-MAR-1992; 92US-00847977.
XX PR 06-MAR-1992; 92US-00847951.
XX PR 04-MAY-1992; 92US-00881995.
XX PR 22-JUL-1992; 92US-00918278.
XX PR 20-JAN-1993; 93US-00007115.
XX PR 19-JAN-1994; 94US-00184009.
XX PR 14-APR-1994; 94US-00228926.
XX PR 13-SEP-1994; 94US-00306259.
XX PA (HEAL-) HEALTH RES INC.
XX PI Paoletti E;
XX WPI; 1999-493494/41.
XX PT Recombinant poxviruses comprising exogenous DNA encoding antigenic
XX PT determinants useful in immunotherapy to immunize against cancers and
XX PT other diseases such as influenza, Newcastle Disease and rabies.
XX PS Example 15; Fig 18; 163pp; English.
XX CC The present invention describes a recombinant poxvirus (I), comprising
XX CC exogenous DNA encoding an antigenic determinant of a pathogen which is
XX CC then expressed in vivo in infected host cells after administration to a
XX CC patient and therefore induces an immunological response. (I) may be used
XX CC to vaccinate patients against a wide range of diseases and disorders
XX CC depending on the type of antigen encoded by the exogenous DNA. (I) may be
XX CC used to vaccinate against diseases such as rabies, influenza and
XX CC Newcastle Disease. It is particularly useful for immunising against
XX CC cancers. The poxvirus (I) also provides a means of manipulating
XX CC lymphocytes and tumour cells for use in cell-based immunotherapeutic
XX CC modalities for cancer. (I) also have enhanced safety compared to
XX CC unattenuated viruses (attenuation reduces the virulence of the viruses)
XX CC and known recombinant poxvirus vaccines. This increased level of safety
XX CC reduces the possibility of a 'runaway' infection in the host and reduces
XX CC the chance of transmission from vaccinated to unvaccinated individuals
XX CC and contamination of the environment. The present sequence represents a
XX CC H6/p53 (wildtype) expression cassette and flanking regions from vCP207
XX CC used in the exemplification of the present invention
XX SQ Sequence 1484 BP; 367 A; 416 C; 371 G; 330 T; 0 U; 0 Other;

Query Match      2.3%; Score 26.6; DB 1; Length 1484;
Best Local Similarity 51.2%; Pred. No. 9;
Matches 62; Conservative 0; Mismatches 59; Indels 0; Gaps 0;

QY 174 AGGTCCAGATGAAGTCCAGATGCCAGAGGCTGCTCCCGCGTGGCCCTGCACGACG 233
Db 526 AGGACAGAGATGACAGGGGCCAGGAGGGGCTGTGTCAGGGGCCCGCGTGTAGGAGC 467
QY 234 AGCTCTACACCGGGGCCCTGTGCACGACGACCCCTCTGCGCCCTGTCTCTCTGTCCTC 293
Db 466 TGCTGTGACAGGGGCCACCGCGGAGGAGCCTCTGSCATTCTGGAGCTTCATCTGGACC 407
QY 294 T 294

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Tue Sep 28 12:08:39 2004

Db 406 T 406

Search completed: September 28, 2004, 12:07:34
Job time : 18 secs